Designing and Implementing a Program to Enhance Music Theory Skills Through Integrated Learning Exercises

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My Philosophy of Music Education

I believe in the power of music. I believe music has the power to reach hearts, to change minds, to shape our world. If we combine music and education, we have the tools that will enable us to teach virtually any subject, communicate virtually any information. Music goes beyond merely teaching students how to make a prosperous living; it teaches us how to live. I believe we should select music that follows a wide variety of styles. To be well-rounded, children should not only study music of their community, but also broaden their horizons and explore other cultures, styles, and time periods.

Finally, I believe if we put anything to music and rhythm, it can be taught and learned faster, remembered longer, and even become a part of our lives. Music touches more senses children have than just hearing and seeing. Music touches their hearts, and gives the children a sense of self-identity. I believe how we shape each individual child's creation of music in our classes will shape the culture of our world to come.

Abstract

Title: Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises

Level: Middle School, Grades 6-8

Subject: Music Theory Exercises As Integrated With Performance Repertoire

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This study examines the effectiveness of integrating a music theory workbook and theory concepts directly into the performance repertoire of 5 middle schools. Over a 3-week to 3-month treatment period, the activities include identifying and integrating the target concepts within each daily rehearsal. An examination of the scope and sequence of 7 beginning band method books, a survey of a sample of music educators of the North Carolina Music Educators Association, contacts within the University of North Carolina at Pembroke, and contacts with other area universities helps determine the focus of the project. The program sample consists of 14 groups in both band and choral disciplines. A pre-test determines baseline knowledge, and a post-test determines the level of growth. Overall results are positive and post-test scores show improvement in 325 out of 348 participants.

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises

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I. Rationale

"I just want to play that song I heard on the radio!"

"I can't tell if it's right or not, it all sounds good to me."

"It looks so good when they put their instruments up and down together!"

"I don't know about all that technical stuff, I just like hearing songs I know."

Music students, parents of music students, and school board members have said these statements above in response to music concerts and music education. The parents often do not care if the students really understand the principles behind the creation of the piece; they just enjoy hearing the music their child is performing. In many schools, students become involved in music at the elementary and middle school levels because they want to play or sing songs they have heard. It is not wrong for students to learn songs that they may have heard elsewhere. The challenge is that the students also need to know the whys and hows behind the music to understand fully what it is they are doing. Unfortunately, studying the theory behind the actual music has fallen from focus in many programs.

What is the relationship between music theory and performance of music? Jorgensen (2003, p. 131) writes ". . . theory is important, and bridging the gap between theory and practice is a tall order that requires revaluing practice, forging strong links between theory and practice . . . and to see the connection between the two." She goes on to write "And the more closely that teaching experiences mirror real-life situations, the more seriously students can be expected to take their theoretical study . . ." According to Schleuter (1984, p. 93-94), "Instrumental techniques and musical content continuously interact. Instrumental techniques are developed as a result of the musical content sequence, and musical content may be chosen to teach specific instrumental techniques." Directors often select pieces of music to address different learning

objectives they know their students need and use elements of music theory to teach performance technique. "Morrison and Fyk (2002) note that students' ability to attend to musical elements beyond the results of their own individual efforts seems to increase with experience and that with focused instruction students can learn to be more aware of their performance . . ." (Morrison, S., Montemayor, M., & Wiltshire, E. 2004, p. 118). The conclusion is that the more exposure a student has to musical elements through instruction, the more he/she will apply them in performance, and the better the student performance will be. Putting it in a different way, we don't necessarily need to know how to make the rubber that goes into a tire for a car, but we should know how to take care of a tire, how to use one, and how to change a flat tire before we go out driving. We do not have to know everything about the tire, but the more we know, the better our driving experience is likely to be. The same principle applies to music. Students may not know everything about making music, but the more they know, the better their musical experience is likely to be.

The casual observer might conclude that if the music program looks good, the musical director, the school principal, and the school advisory board must be doing good work. A good performance could mean that the students are learning what they should and everyone is doing his/her job well. However, this is not necessarily true. Often, to save time, educators take shortcuts in the education processes that allow the students to perform the music without the real understanding of the actual music theory and principles behind the music. While there is some value in teaching by rote, doing so does not give the students the skills they need to be able to create music on their own, only imitate what someone else demonstrates for them. Additionally, instruction in music theory teaches skills that transfer to the performance of other pieces of music not currently in a student's repertoire. Musicians refer to the performance of a new piece

of music without specific prior practice as sight-reading. If a student develops his/her music theory skills and understands the concepts behind the music, he/she will have the basic tools to transfer and apply the concepts to a piece he/she has not rehearsed. The student will be able to move beyond the music taught in his/her class and explore literature outside of his/her selected group. One of the most valuable music skills identified in the continuing of music involvement throughout a student's life is sight-reading. Understanding music theory concepts is crucial to this phase of a student's development.

The casual observer might also conclude that if a student is not continuing his /her music education into high school, why should he/she learn music theory in middle school? The real interest may be, after all, in just learning to play the music. This argument has several flaws. First, this argument goes against the proven research that if a student understands the concepts behind the music, he/she will perform the music better. Second, all of the concepts addressed in this project were also contained in first, second, and third-year band method books, so the concepts are age/experience appropriate for middle school. One of the reasons learning music theory has a "boring" reputation is that the application/connection to the performance is not established. Students are often taught the concepts and do not see how it is relevant to what they are doing. This project addresses this lack of connection directly. Lastly, most students do not sign up for high school classes until the spring semester of his/her last year in middle school. If music educators wait until the last semester to introduce the concepts, it may be too late to inspire the student to learn more about music and too late to benefit from the improved performances resulting from deeper understanding of the concepts.

Some students have said that they really do not know how to read the music; they just listened to what the director said their part should sound like so many times that they "picked it

up by ear." Actually, playing by ear is a musical objective, and while some of this is essential, it should not be solely how our students learn to play music. "Musical theory is too often the study of the signs of music, instead of the experience and analysis of music itself. It ought to be a consequence, not an end to itself," according to Emile Jacques Dalcroze (1985, p. 121). The conclusion is that just teaching students music theory by itself is not the answer.

Many students enter college with this limited understanding of music theory. These students find the need to go back and pick up information that should already be in his/her repertoire. The pressures of performance, the lack of interest in the theoretical mechanics of music, and budget shortages have affected the level of music education in the public schools. The university level curriculum is an extension of the basic skills defined by established standards, for example, the North Carolina Standard Course of Study (NCSOS). Without the establishment of these skills earlier in the student's development, students have to take remedial-type theory classes upon entering the universities. This lack of solid, basic skills of incoming freshmen is slowing their progress.

The goals of this music thesis project are to explore this process of how we teach music theory in the public middle schools in relation to curricula at the university level, and to make recommendations based on these findings. A solid foundation and understanding of basic core concepts at the middle school level is necessary to support student development in high school, as well as at the university level.

II. Introduction

In the spring of 2004, the writer of this project was working towards the completion of his studies for a master's degree at the University of North Carolina at Pembroke (UNCP). During this time, through one of his professors, he became aware of the incoming students' need for adequate music theory skills. Interviews with several other UNCP faculty members confirmed the conclusion. Overall, the incoming students at the university were weak in the area of music theory.

What is music theory? "Narrowly it may be defined as the description in words of elements of music, and the interrelationship between the notation of music and performance practice," (Boretz, 1995, Internet).

The casual observer may wonder why the study of music theory is important. Marzano, R., Pickering, D., & Pollock, J. (2001, p. 70) wrote, "It is also important, however, that students understand how a skill or a process works." If students understand how the music theory behind a piece works, they will understand the performance of the music even more.

Was the need for stronger music theory skills on the part of the incoming students a localized occurrence, or did it occur at other universities as well? Communications with the music departments of other universities of similar size and socio-economic patterns perhaps confirmed the same findings. Contacts with representatives of two additional larger universities further confirmed the trend. At all universities contacted, many incoming students were weak in the area of music theory skills. Most of the universities contacted, like UNCP, had developed a music theory entrance exam of their own. These universities placed low-scoring students in basic theory classes (remedial courses) where the instruction proceeded at a slower pace than

regular music theory classes. Enhanced theoretical study on the middle school level would address the skills identified as important on the college-level theory placement tests.

This project embedded these skills in theory-learning exercises that themselves, integrate into the performing curricula. The writer examined seven current band method book series to determine which skills each book introduced and when these skills occurred in each series (Figures 1.1-1.6). A chart of these skills shows the scope and sequence of concepts of each method book. The writer designed and administered a survey to a sample of music educators from District 11 of the North Carolina Music Educators Association (NCMEA). This survey determined which skills the educators themselves felt were important for the students to know, and in which of these skills they felt their students were the strongest and weakest. Graphs of the seven selected areas show the results of the surveys. The analysis of the surveys, the analysis of the method books, and the analysis of the UNCP music theory entrance exam *Fundamentals of Music Theory Sample Test A* (Maisonpierre, B., 2004), guided the selection of concepts the project addresses. The final step in the selection process was the interview of directors who volunteered to participate in the project. These directors helped identify specific skills they felt were target areas for their own students. Comparisons of these four sources of data revealed commonalities. The range of this project concentrates on the commonalities of the data revealed from the surveys, the method book analysis, the Sample Test A, and the director interviews.

The guidelines of this study integrate real experiences with relevant examples to connect music theory to practice. Activities selected integrate the concepts directly into the context of each student's performance and music skills. A music theory book by itself is not the answer. There are already many theory books on the market, and although some cover the identified concepts, the connection of theory concepts to the repertoire is the focus of this study.

A survey of resources supports the construction of an activity book for the students titled *The Sequential Theory Training Manual* (*STT*). The *STT* manual concludes with instructions for participating directors to follow as they implement the activities. The UNCP music theory entrance exam guides for the formats for the pre- and post-tests. Activities in this study include the production, distribution, and implementation of the *STT Manuals* and the pre- and post-tests. The scoring of the pre-tests provides a description of baseline knowledge of each student. During the implementation phase, communications between the writer and the three other participating directors allow adjustments to the project due to scheduling and unforeseen events. Analysis and comparison of the results from the pre- and post-tests define the outcomes of this study. A follow-up directors' survey concludes the project.

III. Review of Related Literature

A. Book Review

Interviews with UNCP faculty members indicate there has been a growing concern in recent years over the need for stronger music theory skills among incoming college freshmen. As freshmen enter universities from so many varied programs, the difficulty is to find a program that addresses the music theory growth areas of all music disciplines. The writer began the pre-planning phase of this project by making a list of musical concepts, and then drew the concepts that used music symbols individually on index cards. This process of brainstorming included the grouping of certain cards/concepts together, and this grouping facilitated the organization of concepts. Possible logical sequences and relationships developed by arranging and re-arranging the music symbol cards. The writer, a middle school band conductor, had tried several different beginning band method books with his classes throughout his career. He believed studying what authors of additional method books chose as critical concepts and sequences for their texts would be helpful. This study of band method books assisted in the selection of concepts to address in the project.

The establishment of contact with several method book companies led to the inclusion of their series in the project. Five current band method book publishers sent the writer editions of their series and two additional books were already on hand. The books examined were *Standard of Excellence, Essential Elements 2000, Yamaha Advantage, Premier Performance, Band Expressions, Accent on Achievement,* and *Boosey Woodwind Method.* An analysis of the books led to the development of a scope and sequence chart (Figures 1.1-1.6).

Figures 1.1-1.6

Table of Method Books

Figure 1.1

Name of Method Concept Introduced	Standard of Excellence	Essential Elements 2000	Yamaha Advantage	Premier Performance	Band Expressions	Accent on Achievement	Boosey Woodwind Method
Book I							
1. staff	B 1 p.6	B 1 p.3	B 1 p.4	B 1 p.5	B 1 p.4	B 1 p.5	B 1 p.8
2. clef signs	B 1 p.6	B 1 p.5	B 1 p.6	B 1 p.5	B 1 p.4	B 1 p.5	B 1 p.8
3. 4/4 time signature	B 1 p.6	B 1 p.4	B 1 p.5	B 1 p.6	B 1 p.6	B 1 p.6	B 1 p.10
4. measures	B 1 p.6	B 1 p.3	B 1 p.4	B 1 p.5	B 1 p.4	B 1 p.5	B 1 p.10
5. bar lines	B 1 p.6	B 1 p.3	B 1 p.4	B 1 p.9	B 1 p.4	B 1 p.5	B 1 p.10
6. whole note	B 1 p.6	B 1 p.7	B 1 p.7	B 1 p.6	B 1 p.12	B 1 p.6	B 1 p.17
7. whole rest	B 1 p.6	B 1 p.7	B 1 p.7	B 1 p.6	B 1 p.12	B 1 p.6	B 1 p.11
8. double bar	B 1 p.6	B 1 p.5	B 1 p.6	B 1 p.6	B 1 p.4	B 1 p.5	B 1 p.10
9. note names	B 1 p.6	B 1 p.5	B 1 p.6	B 1 p.5	intro thru bk	B 1 p.5	intro thru bk
10. half notes	B 1 p.7	B 1 p.6	B 1 p.7	B 1 p.8	B 1 p.12	B 1 p.8	B 1 p. 9
11. half rests	B 1 p.7	B 1 p.6	B 1 p.7	B 1 p.8	B 1 p.12	B 1 p.8	B 1 p.11
12. breath mark	B 1 p.7	B 1 p.6	B 1 p.7	B 1 p.8	B 1 p.4	B 1 p.7	B 1 p. 9
13. duet	B 1 p.7	B 1 p.8	B 1 p.7	B 1 p.9	B 1 p.10	B 1 p.7	B 1 p.11
14. trio	n/a	n/a	n/a	n/a	n/a	n/a	B 1 p.46
15. quarter note	B 1 p.8	B 1 p.4	B 1 p.7	B 1 p.8	B 1 p.6	B 1 p.7	B 1 p.9
16. quarter rest	B 1 p.8	B 1 p.4	B 1 p.7	B 1 p.8	B 1 p.6	B 1 p.9	B 1 p.16
17. phrase	B 1 p.8	B 1 p.20	B 1 p.17	B 1 p.7	B 1 p.12	n/a	B 1 p.31
18. repeat sign	B 1 p.9	B 1 p.5	B 1 p.9	B 1 p.7	B 1 p.12	B 1 p.9	B 1 p.15
19. common time	B 1 p.9	B 1 p.26	B 1 p.32	n/a	n/a	B 1 p.31	n/a
20. fermata	B 1 p.9	B 1 p.8	B 1 p.18	B 1 p.22	B 1 p.4	B 1 p.16	B 1 p.12
21. solo	B 1 p.9	B 2 p.40	B 1 p.13	B 1 p.15	n/a	B 1 p.6	B 1 p. 41
22. soli	B 1 p.9	n/a	B 1 p.13	n/a	n/a	n/a	n/a
23. tutti	B 1 p.9	n/a	B 1 p.13	n/a	n/a	n/a	n/a
24. tie	B 1 p.10	B 1 p.14	B 1 p.10	B 1 p.13	B 1 p.16	B 1 p.10	n/a
25. 2/4 time signature	B 1 p.11	B 1 p.11	B 1 p.9	B 1 p.13	B 1 p.30	B 1 p.9	B 1 p.18
26. sharp	B 1 p.11	B 1 p.5	B 1 p.15	intro thru bk	B 1 p.4	B 1 p.15	B 1 p.24
27. key signature	B 1 p.11	B 2 p.4	B 1 p.12	B 1 p.14	B 1 p.10	n/a	B 1 p.29
28. round	B 1 p.11	B 1 p.12	B 1 p.13	Book 2 p.12	n/a	B 1 p.9	B 1 p.25
29. Bb key signature	B 1 p.11	B 1 p.7	B 1 p.12	B 1 p.14	n/a	B 1 p.10	n/a
30. divisi	B 1 p.12	B 3 p.14	B 1 p.14	B 1 p.14	n/a	B 1 p.14	n/a
31. unison	B 1 p.12	n/a	B 1 p.14	B 1 p.15	B 1 p.10	n/a	n/a
32. 8th notes	B 1 p.13	B 1 p.10	B 1 p.14	B 1 p.20	B 1 p.14	B 1 p.12	B 1 p.30
33. slur	B 1 p.15	B 1 p.19	B 1 p.16	B 1 p.18	B 1 p.16	B 1 p.14	B 1 p.25
34. pick up notes	B 1 p.15	B 1 p.9	B 1 p.17	B 1 p.17	B 1 p.14	B 1 p.16	n/a
35. Eb key signature	B 1 p.16	B 1 p.16	B 1 p.20	B 1 p.17	n/a	B 1 p.18	n/a
36. flat	B 1 p.16	B 1 p.5	B 1 p.6	intro thru bk	B 1 p.4	B 1 p.18	B 1 p.27

B=book number

n/a=not addressed/available

Figure 1.2

Method Book	Standard of Excellence	Essential Elements 2000	Yamaha Advantage	Premier Performance	Band Expressions	Accent on Achievement	Boosey Woodwind Method
Concept Introduced							
37. dotted half notes	B 1 p.17	B 1 p.14	B 1 p.16	B 1 p.18	B 1 p.18	B 1 p.14	B 1 p.29
38. 3/4 time signature	B 1 p.17	B 1 p.15	B 1 p.16	B 1 p.18	B 1 p.18	B 1 p.14	B 1 p.29
39. dynamics-F	B 1 p.17	B 1 p.9	B 1 p.12	B 1 p.19	B 1 p.14	B 1 p.15	B 1 p.43
40. 7/4 time signature	n/a	n/a	n/a	n/a	n/a	n/a	B 1 p.48
41. dynamics-P	B 1 p.17	B 1 p.9	B 1 p.12	B 1 p.20	B 1 p.14	B 1 p.15	B 1 p.43
42. natural sign	B 1 p.18	B 1 p.5	B 1 p.15	n/a	B 1 p.20	B 1 p.19	B 1 p.28
43. accent	B 1 p.19	B 1 p.15	B 1 p.17	B 1 p.15	B 1 p.18	B 1 p.19	
44. 1st and 2nd endings	B 1 p.19	B 1 p.16	B 1 p.10	B 1 p.13	B 1 p.18	B 1 p.13	B 1 p.36
45. one measure repeat sign	B 1 p.19	B 2 p.28	B 1 p.15	B 1 p.14	B 1 p.30	n/a	n/a
46. 2 measure repeat sign	n/a	n/a	n/a	B 1 p.17	n/a	n/a	n/a
47. multiple measure rest	B 1 p.20	B 1 p.20	B 1 p.11	n/a	B 1 p.22	B 1 p.22	B 1 p.23
48. D key signature	B 1 p.20	n/a	n/a	n/a	n/a	n/a	n/a
49. F key signature	B 1 p.23	B 1 p.20	B 1 p.15	n/a	n/a	B 1 p.15	n/a
50. DC al Fine	B 1 p.24	B 1 p.18	B 1 p.25	B 1 p.26	B 1 p.36	B 1 p.27	n/a
51. single eighth note or rest	B 1 p.24	n/a	B 1 p.18	n/a	n/a	B 1 p.20	B 1 p.45
52. dotted quarter/eighth note	B 1 p.27	B 1 p.22	B 1 p.25	n/a	B 1 p.34	B 1 p.25	n/a
53. eighth/dotted quarter	n/a	n/a	B 1 p.25	n/a	n/a	n/a	n/a
54. accidentals	B 1 p.27	B 1 p.15		B 1 p.22	B 1 p.20	n/a	n/a
55. andante	B 1 p.28	B 1 p.11	B 1 p.23	B 1 p.22	B 1 p.26	B 1 p.12	B 1 p.47
56. moderato	B 1 p.28	B 1 p.11	B 1 p.23	B 1 p.19	B 1 p.26	B 1 p.10	n/a
57. allegro	B 1 p.28	B 1 p.11	B 1 p.23	B 1 p.22	B 1 p.26	B 1 p.10	n/a
58. mp	B 1 p.28	B 2 p.9	B 1 p.30	B 1 p.19	B 1 p.14	B 1 p.22	n/a
59. mf	B 1 p.28	B 1 p.9	B 1 p.13	B 1 p.19	B 1 p.14	B 1 p.22	B 1 p.49
60. crescendo	B 1 p.29	B 2 p.7	B 1 p.13	B 1 p.21	B 1 p.34	B 1 p.30	B 1 p.46
61. decrescendo	B 1 p.29	B 2 p.7	B 1 p.24	B 1 p.21	B 1 p.34	B 1 p.30	B 1 p.46
62. ritardando	B 1 p.31	B 2 p.6	B 1 p.30	B 1 p.22	B 1 p.38	B 1 p.16	B 1 p.29
63. largo	B 1 p.31	B 1 p.23	B 1 p.30	n/a	B 1 p.34	B 1 p.27	n/a
64. tacet	n/a	n/a	n/a	B 1 p.27	n/a	n/a	n/a
65. rallentando	n/a	B 1 p.16	n/a	n/a	n/a	n/a	B 1 p.43
66. ostinato	n/a	n/a	n/a	n/a	B 1 p.16	n/a	B 1 p.43
67. vivace	n/a	n/a	Book 2 p.26	n/a	n/a	B 1 p.21	n/a

B=book number

n/a=not addressed/available

Figure 1.3

Method Book Concept Introduced	Standard of Excellence	Essential Elements 2000	Yamaha Advantage	Premier Performance	Band Expressions	Accent on Achievement	Boosey Woodwind Method
58.rehearsal letters/number	n/a	n/a	B 1 p.15	n/a	B 1 p.22	n/a	n/a
Book II	**Book II**	**Book II**	**Book II**	**Book II**	**Book II**	**Book II**	**Book II**
69.majorscale formula	n/a	B 2 p.30	B 2 p.2	n/a	Book 1 p.42	B 2 p.15	n/a
70. octave	n/a	n/a	B 2 p.2	n/a	n/a	n/a	n/a
71. piano keyboard	n/a	B 2 p.22	B 2 p.2	n/a	n/a	B 2 p.8	n/a
72. syncopation	B 2 p.5	B 2 p.9	B 2 p.8	B 2 p.7	Book 1 p.38	Book 1 p.28	Book 1 p.58
73. intervals-3rd & 6th	B 2 p.5	B 3 p.4	n/a	n/a	n/a	n/a	n/a
74.intervals-whole-half step	n/a	Book 1 p.23	B 2 p.2	n/a	Book 1 p.42	B 2 p.8	n/a
75. numerical primary chords	n/a	n/a	B 2 p.4 & 5	B 1 p.14	Book 1 p.18	n/a	n/a
76. arpeggios/thirds	n/a	n/a	n/a	B 2 p.40-41	n/a	n/a	n/a
77. accelerando	B 2 p.6	B 2 p.26	n/a	n/a	n/a	n/a	n/a
78. DS al Fine	B 2 p.7	B 2 p.26	Book 1 p. 26	Book 1 p. 28	Book 1 p.40	B 2 p.5	n/a
79. eighth rest	B 2 p.8	B 2 p.2	B 2 p.6	n/a	n/a	n/a	n/a
80. Ab key signature	n/a	Book 1 p.14	B 2 p.6	n/a	n/a	Book 1 p.33	n/a
81. monophony	B 2 p.9	n/a	n/a	n/a	n/a	n/a	n/a
82. polyphony	B 2 p.9	n/a	n/a	n/a	n/a	n/a	n/a
83. enharmonics	B 2 p.10	B 2 p.22	B 2 p.19	n/a	n/a	B 2 p.19	n/a
84. staccato	B 2 p.10	B 2 p.5	Book 1 p. 21	Book 1 p.19	B 1 p.32	Book 1 p.22	B 1 p. 45
85. PP	n/a	n/a	B 2 p.13	n/a	n/a	B 2 p.27	n/a
86. adagio	n/a	n/a	B 2 p.12	n/a	n/a	B 2 p.25	n/a
87. allegretto	B 2 p.10	n/a	n/a	Book 1 p.29	n/a	B 2 p.7	n/a
88.C minor key signature	n/a	n/a	B 2 p.14	n/a	n/a	n/a	n/a
89. natural minor	n/a	B 2 p.30	B 2 p.10	n/a	n/a	n/a	n/a
90. harmonic minor	n/a	B 2 p.30	B 2 p.10	n/a	n/a	n/a	n/a
91. tenuto	B 2 p.11	B 2 p.5	B 2 p.32	Book 1 p.36	B 1 p.32	B 2 p.9	n/a
92. legato	B 2 p.11	B 2 p.27	Book1 p. 30	Book 1 p.23	B 1 p.32	n/a	n/a
93. melody	B 2 p.12	n/a	n/a	n/a	n/a	n/a	n/a
94. cut time	B 2 p.13	B 2 p.7	B 2 p.21	n/a	n/a	B 2 p.7	n/a
95. chord-root, third, fifth	B 2 p.14	B 3 p.7	n/a	n/a	n/a	n/a	n/a
96. DC al Coda	B 2 p.16	n/a	B 2 p.22	n/a	n/a	Book 1 p.18	n/a
97. DS al Coda	n/a	B 2 p.31	B 2 p.22	Book 1 p.27	n/a	Book 1 p.22	Book 1 p.58
98. 3/8 time signature	B 2 p.17	n/a	B2 p.27 & 32	B 2 p.20	n/a	Book 3 p.25	n/a
						B=book number	n/a = not addressed

Figure 1.4

Method Book Concept Introduced	Standard of Excellence	Essential Elements 2000	Yamaha Advantage	Premier Performance	Band Expressions	Accent on Achievement	Boosey Woodwind Method
99. C major key signature	B 2 p.3	B 2 p.10	B 2 p.3	n/a	Book 1 p.44	n/a	n/a
100. 6/8 time signature	B 2 p.18	B 2 p.21	B 2 p.28 & 29	B 2 p.22-23	n/a	B 2 p.22	Book 1 p.52
101. 16th notes	B 2 p.19	B 2 p.11	Book 1 p. 20	B 2 p.12	n/a	B 2 p.10	n/a
102. 8th/16th combinations	B 2 p.21	n/a	Book 1 p. 21	n/a	n/a	B 2 p.13	n/a
103. single 16th note	B 2 p.25	B 2 p.11	n/a	n/a	n/a		n/a
104. dotted 8th note/16th	B 2 p.25	n/a	Book 1 p. 22	B 2 p.19	n/a	B 2 p.15	n/a
105. 8th note triplet	B 2 p.27	B 2 p.24	Book 1 p. 24	B 2 p.25	n/a	B 2 p.29	n/a
106. maestoso	B 2 p.27	n/a	n/a	Book 1 p.26	n/a	B 2 p.9	n/a
107. D major key signature	B 2 p.4	n/a	n/a	n/a	n/a	n/a	n/a
108. 5/4 time signature	n/a	B 3 p.35	n/a	n/a	n/a	n/a	Book 1 p.38
109. 12/8 time signature	n/a	n/a	n/a	n/a	n/a	n/a	n/a
110. A minor key signature	B 2 p.11	n/a	Book 1 p. 10	n/a	n/a	n/a	n/a
111. quarter note triplets	n/a	n/a	n/a	n/a	n/a	Book 3 p.17	n/a
112. sfz	n/a	n/a	n/a	n/a	n/a	B 2 p.25	n/a
113. grace note	n/a	n/a	n/a	n/a	n/a	B 2 p.29	n/a
114. a tempo	n/a	B 2 p.19	n/a	n/a	n/a	n/a	n/a
Book III	**Book III**	**Book III**	**Book III**	**Book III**	**Book III**	**Book III**	**Book III**
115. concert Bb key signature	B 3 p.2	B 3 p.2	n/a	n/a	n/a	B 3 p.2	n/a
116. simile	B 3 p.2	n/a	n/a	n/a	n/a	n/a	n/a
117. enharmonic notes		Book 1 p.33	n/a	n/a	n/a	B 2 p.19	n/a
118. chromatic scale	B 3 p.2	Book 1 p.33	Book 2 p. 19	n/a	n/a	B 3 p.2	n/a
119. G minor key signautre	B 3 p.3	B 3 p.25	n/a	n/a	n/a	B 3 p.4	n/a
120. minor scales	B 3 p.3	n/a	n/a	n/a	n/a	B 3thru out bk	n/a
121. 6/8 time signature	B 3 p.3	n/a	n/a	n/a	n/a	Book 2 p.22	n/a
122. intervals	B 3 p.3	Book 1 p.26	n/a	n/a	n/a	n/a	n/a
123.Eb key signature	B 3 p.4	n/a	n/a	n/a	n/a	B 3 p.6	n/a
124. major/minor chord	B 3 p.4	n/a	n/a	n/a	n/a	n/a	n/a
125.C minor key signature	B 3 p.5	n/a	n/a	n/a	n/a	B 3 p.8	n/a
126.Fmajor key signature	B 3 p.6	n/a	n/a	n/a	n/a	B 3 p.10	n/a

Figure 1.5

Method Book Concept Introduced	Standard of Excellence	Essential Elements 2000	Yamaha Advantage	Premier Performance	Band Expressions	Accent on Achievement	Boosey Woodwind Method
127. 16th/dotted 8th notes	B 3 p.7	n/a	n/a	n/a	n/a	B 3 p.7	n/a
128. major scale pattern	B 3 p.7	n/a	n/a	n/a	n/a	n/a	n/a
129. Ab key signature	B 3 p.8	n/a	n/a	n/a	n/a	B 3 p.54	n/a
130. 16th/8th/16th notes	B 3 p.8	n/a	n/a	n/a	n/a	B 3 p.11	n/a
131. pentatonic scale	B 3 p.9	B 3 p.14	n/a	n/a	n/a	n/a	n/a
132. 8th note triplets	B 3 p.9	n/a	n/a	n/a	n/a	B 3 p.9	n/a
133. composing	B 3 p.9	n/a	n/a	n/a	n/a	n/a	n/a
134. D minor key signature	B 3 p.10	B 3 p.18	Book 2. p. 26	n/a	n/a	B 3 p.12	n/a
135. andantino	B 3 p.10	n/a	n/a	n/a	n/a	n/a	n/a
136. tonality	B 3 p.11	n/a	n/a	n/a	n/a	n/a	n/a
137. 16th rest	B 3 p.11	n/a	n/a	n/a	n/a	n/a	n/a
138. dotted quarter rest	B 3 p.12	n/a	n/a	n/a	n/a	n/a	n/a
139. trio	B 3 p.12	n/a	n/a	n/a	n/a	n/a	n/a
140. Db major key	B 3 p.13	n/a	n/a	n/a	n/a	B 3 p.22	n/a
141. scale in fourths	B 3 p.15	n/a	n/a	n/a	n/a	n/a	n/a
142. simile	B 3 p.15	n/a	n/a	Book 2 p.3	n/a	n/a	n/a
143. chords	B 3 p.16	n/a	Book 2 p. 3	n/a	n/a	n/a	n/a
144. 9/8 time signature	B 3 p.17	B 3 p.29	n/a	n/a	n/a	B 3 p.3	n/a
145. grazioso	B 3 p.17	n/a	n/a	n/a	n/a	n/a	n/a
146. legato	B 3 p.19	n/a	n/a	n/a	n/a	n/a	n/a
147. dotted 8th/16th/dotted 8th	B 3 p.19	n/a	n/a	n/a	n/a	B 3 p.13	n/a
148. 8th note and 4 16th notes	B 3 p.19	n/a	n/a	n/a	n/a	n/a	n/a
149. largetto	B 3 p.21	n/a	n/a	n/a	n/a	n/a	n/a
150. dolce	B 3 p.21	n/a	n/a	n/a	n/a	n/a	n/a
151. grace note	B 3 p.21	n/a	n/a	n/a	n/a	n/a	n/a
152. forms-binary, ternary	B 3 p.22-23	n/a	n/a	n/a	n/a	n/a	n/a
153. cut time	B 3 p.23	n/a	n/a	n/a	n/a	n/a	n/a
154. 6/4 time signature	B 3 p.26	n/a	n/a	n/a	n/a	B 3 p.15	n/a
155. 5/4 time signature	B 3 p.27	n/a	n/a	n/a	n/a	B 3 p.15	n/a
156. sostenuto	B 3 p.27	n/a	n/a	n/a	n/a	n/a	n/a
157. 12/8 time signature	B 3 p.28	B 3 p.33	n/a	n/a	n/a	B 3 p.3	n/a

Figure 1.6

Method Book	Standard of Excellence	Essential Elements 2000	Yamaha Advantage	Premier Performance	Band Expressions	Accent on Achievement	Boosey Woodwind Method
Concept Introduced							
58. sforzando	B 3 p.28	n/a	n/a	n/a	n/a	n/a	n/a
59. glissando	B 3 p.28	n/a	n/a	n/a	n/a	n/a	n/a
60. cantabile	B 3 p.29	n/a	n/a	n/a	n/a	n/a	n/a
61. A minor key signature	B 3 p.30	n/a	n/a	n/a	n/a	B 3 p.20	n/a
62. whole tone scale	B 3 p.30	n/a	n/a	n/a	n/a	n/a	n/a
63. asymetrical meter	B 3 p.31	n/a	n/a	n/a	n/a	n/a	n/a
64. tone row	B 3 p.31	n/a	n/a	n/a	n/a	n/a	n/a
65. fp	B 3 p.33	n/a	Book 2 p. 18	n/a	n/a	n/a	n/a
66. hemiola	B 3 p.34	B 3 p.32	n/a	n/a	n/a	n/a	n/a
67. swing	B 3 p.35	B 3 p.22	n/a	n/a	n/a	n/a	n/a
68. blues scale	B 3 p.35	n/a	n/a	n/a	n/a	n/a	n/a
69. blues chord progression	B 3 p.35	n/a	n/a	n/a	n/a	n/a	n/a
70. ad libitum	B 3 p.36	n/a	n/a	n/a	n/a	n/a	n/a
71. F minor scale	n/a	n/a	n/a	n/a	n/a	B 3 p.16	n/a
72.double dotted quarter16th	n/a	n/a	n/a	n/a	n/a	B 3 p.21	n/a
73. Bb minor scale	n/a	n/a	n/a	n/a	n/a	B 3 p.24	n/a
74. Gb major	n/a	n/a	n/a	n/a	n/a	B 3 p.28	n/a
75. 3/2 time signature	n/a	B 3 p.34	n/a	n/a	n/a	*n/a*	n/a
76. G major key	n/a	B 3 p.36	n/a	n/a	n/a	*n/a*	n/a
						B=book number	n/a=not addressed

The writer had assumed from experience with the method books he had used previously that the method books would cover the same basic concepts, but in different sequences and with different approaches. This assumption proved to be both correct and incorrect. Analysis of the scope and sequence of the different books revealed the commonalities, and also exposed the different approaches used in each book. As shown in the method book charts, some authors chose to address selected concepts in the first year, while other authors chose not to include those concepts until their second-year method books. Two method books were radically different from the other five in their approaches. These two books differed in their presentation and implementation, but contained many of the same concepts addressed in the other five method books.

Looking for the similarities and commonalities led the writer to identify concepts that each author addressed in his/her series. Subsequently, the writer developed a new list of targeted concepts. This list contained the musical components that occurred first or addressed most often by the majority of the method books. After comparing this list with the data from the educator surveys, interviews with participating conductors, and the *Fundamentals of Music Sample Test A,* the writer produced the final list of areas to be targeted.

B. The *Fundamentals of Music Sample Test A*

In 2004, Dr. Elizabeth Maisonpierre designed a pre-enrollment entrance test for the UNCP to determine baseline knowledge in music theory of incoming students. This test is the *Fundamentals of Music Sample Test A* (Appendix D). The writer's analysis of this test revealed concepts and symbols that correlated with many concepts on the list of targeted concepts and symbols from the method book analysis. These concepts included the major scale pattern, key signatures, enharmonic notes, whole/half steps, note values, rest values, and note names. The *Fundamentals of Music Sample Test A* (Maisonpierre, E., 2004) included the additional concepts of interval quality and interval number. The final section of the *STT* manual addressed interval quality and interval number with a study of the intervals used in the blues scale. Further analysis of the *Fundamentals of Music Sample Test A* (*Sample Test A*) revealed additional concepts that were beyond the scope of this project.

Sample Test A also demonstrated a logical sequence of difficulty in the presentation. This sequence progressed from basic to more advanced skills, beginning with note names, note values, and rest values. *Sample Test A* then measured student knowledge of the distance between two pitches and enharmonic equivalence. The final targeted components that fit the scope of this project were the identification of major keys from their key signatures and the major scale pattern.

The writer determined that activities of the project should also follow a sequence that progressed from basic to the more advanced. The writer believed that establishing an understanding of the music symbols that appear commonly in middle school literature was a critical first step. The premise was that the construction of a knowledge base would create an anchor for learning the more advanced components that were to follow.

The writer observed that the *Sample Test A* contained questions that measured knowledge of both the bass- and treble- clef staves. The writer decided to address both the bass- and treble-clef staves in the scope of the project and design activities that would be applicable to all students regardless of their prior single-staff orientation. All students would learn the note names of both the bass- and treble-clef staves in the selected activities. *Sample Test A* included exercises that used the note symbols (whole, quarter, dotted quarter, eighth) and the respective values of each. The writer decided to include the symbols for the half note, half rest, and the numerical value of each symbol. The inclusion of the half note and half rest were included to build on the knowledge of whole rest and to clarify the similar appearing but different in meaning music symbols. In addition, the half rest was included in all of the seven method books in the book analysis. The use of rest values appearing on *Sample Test A* included quarter, half, and sixteenth. Whole rests are not used in *Sample Test A*, but the writer included the whole rest symbol and the whole rest numerical value in the scope of the project because these symbols appeared in all 7 of the method books, these are basic fundamental symbols, and because these symbols commonly appear in middle school literature. The sixteenth rest symbol and its numerical value were not included in the project, as these components of music did not occur in all the wind instrument series examined, with the exception of one reference in book three.

The layout of Sample Test A also provided examples of knowledge measurement tools. The writer determined to use a similar layout for the identification of note letter names and major key signatures because of similarly designed activities also found in the analysis of the *Standard of Excellence Music Theory Workbook.* In addition, the writer believed middle school students would be able to follow the layout successfully with minimal misinterpretations, based on his experience teaching middle school students. The project design included different exercises to

measure knowledge of the major scale pattern and identification of the whole/half step interval. In *Sample Test A*, the interval identification section gives the student a fifty-fifty chance of obtaining the correct answer, as the student must choose between two possible choices. The writer of this project asked the student to write (draw) the second note on the staff using the interval of one-half step higher than the given note. This technique bases the measurement of understanding on a larger number of options. Additionally, the students wrote (drew) a major scale on a blank music staff rather than identifying the scale by letter name and quality as found on *Sample Test A*.

C. *Standard of Excellence Music Theory and History Workbook*

The design of this workbook correlates with the *Standard of Excellence* band method books, one of the sets of texts examined in the method book analysis. The examination of the text provided insight into possible activities and worksheets for the project. From this analysis, the writer began to see the benefits of incorporating the use of the piano keyboard into the theory lessons. To apply this connection in project design, lines that connected the note to the keyboard key emphasized the visual correlation between a key on the keyboard and the corresponding musical note on the staff. The writer postulated that connecting the sound of enharmonic tones with the picture of a keyboard would enable students to grasp the concept more thoroughly. Other activities from the text that the writer included (with variations) were a three-column matching activity, musical math, an activity that incorporated "creative sayings" to recall the order of sharps and flats, and interval arrows on the piano keyboard.

D. *Ready-To-Use Music Activities Kit*

The examination of this text revealed numerous activities commonly implemented in the elementary general music classroom. The design or presentation of many concepts in the text seemed too basic to the writer for the perspective of a middle school student. One of the ideas the writer selected from the text was a graphic of a staircase used to provide a visual for an ascending/descending scale. The components of the keynote of a scale (root) and key signature contained in this text also contributed ideas toward the design of the major scale section of the *STT* workbook.

IV. Communications

Other universities of similar size and socio-economic background to the UNCP were located by the writer on the Internet. Contacts with each music department by the writer confirmed that all were seeing a comparable trend of weak music theory skills in their incoming music students. The writer analyzed these e-mail contacts and affirmed that many universities had similar music theory entrance tests to the UNCP. Students scoring low on these music theory entrance tests take remedial-type classes that address their growth areas at a slower pace than standard music theory classes.

During the Music Educator's Survey, participants indicated to the writer if he/she was willing to participate in the *STT* Program. Initially, 18 directors indicated interest in participation in the program. E-mail contacts and phone calls by the writer confirmed the final willing participants. After design and production of the manuals and workbooks, the writer scheduled face-to-face meetings with each individual director to distribute the materials, review the hands-on activities, and answer questions. The writer established follow-up communications via e-mail

and telephone to answer questions after each director examined the program and also later in the program to monitor the progress of the program. A personal contact by the writer with the participating directors established the return of the pre- and post-tests for grading.

V. *The Sequential Theory Training* Program

A. Research Questions

This project will seek to answer two questions: Will integrated exercises enhance music theory achievement? What teaching strategies will enhance the integration of music theory teaching and learning in a middle school music-performance setting?

B. Subjects of Study

1. Students and Schools

The subjects of this study attended five different public middle schools located in District 11 (NCMEA). The project involved students in the sixth through eighth grade. There were 348 participants, oriented in band or choral disciplines. The majority of the students were in classes that met daily, but one school program met on an every-other-day schedule. Participants in the *STT* project met by grade level, and not by level of their experience in music. Some grade-level classes were combinations of first-, second- and/or third-year students in musical experience. Others were composed of homogenous-experienced students. The class make-up was heterogeneous in sex. Project participants varied in race, creed, and religion. Several of the classes also contained students with special needs. The instructions to the participating directors gave them the freedom to adjust the project to accommodate the needs of his/her students. Class sizes ranged from 15-40. School sizes ranged from 350 to 1000 students in total student population.

2. Music Educators

Volunteers from among the UNCP Music Conference attendees participated in the music educators' survey (Appendix A) that began the data collection phase of the project. The sample of 87 directors contained representatives of almost every musical discipline in public education and grade level. The sample of music educators was heterogeneous, multi-racial, and covered many levels of educational expertise. Figures 2.1-2.7 show the results of the surveys.

3. UNCP Music Faculty

UNCP faculty members interviewed by the writer represented the areas of vocal, instrumental, and music theory departments. The interviewees were heterogeneous in sex and of varied levels of teaching experience. The interview process was individual and informal, and each member did not know the results of other interviewed members prior to his/her interview.

Figure 2.1 Identifying Factors Leading to Success in Music Theory-Constructing a Scale

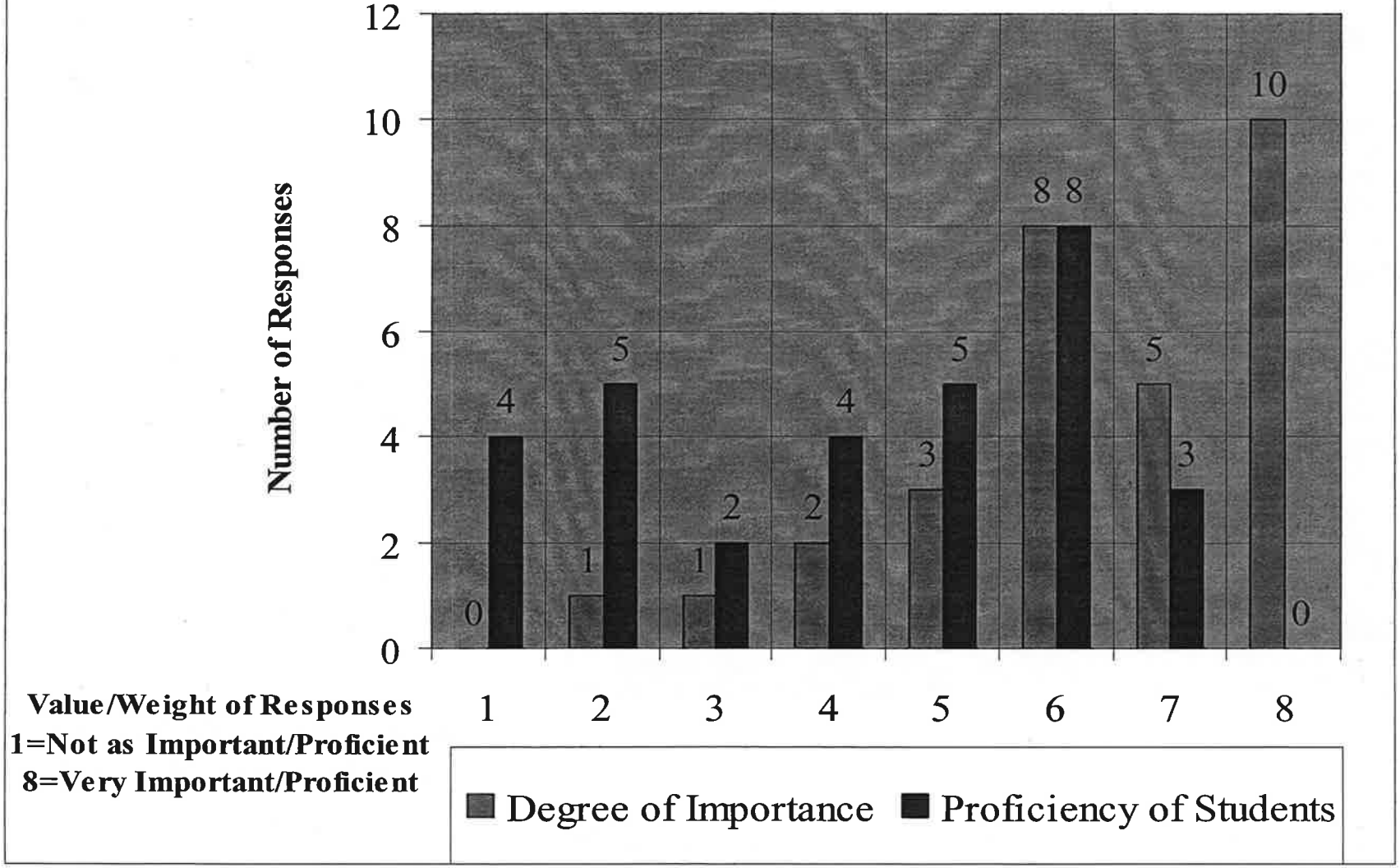
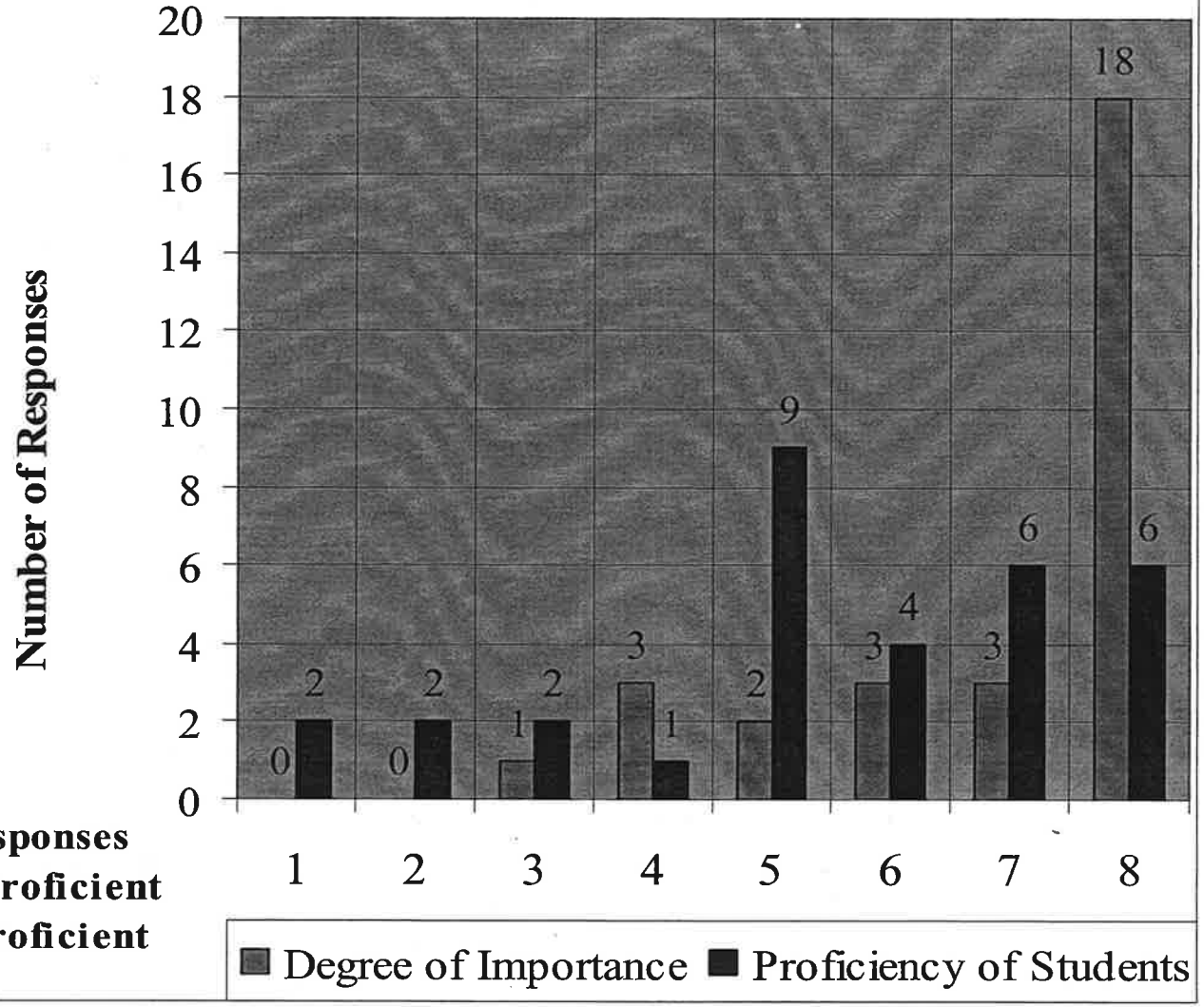
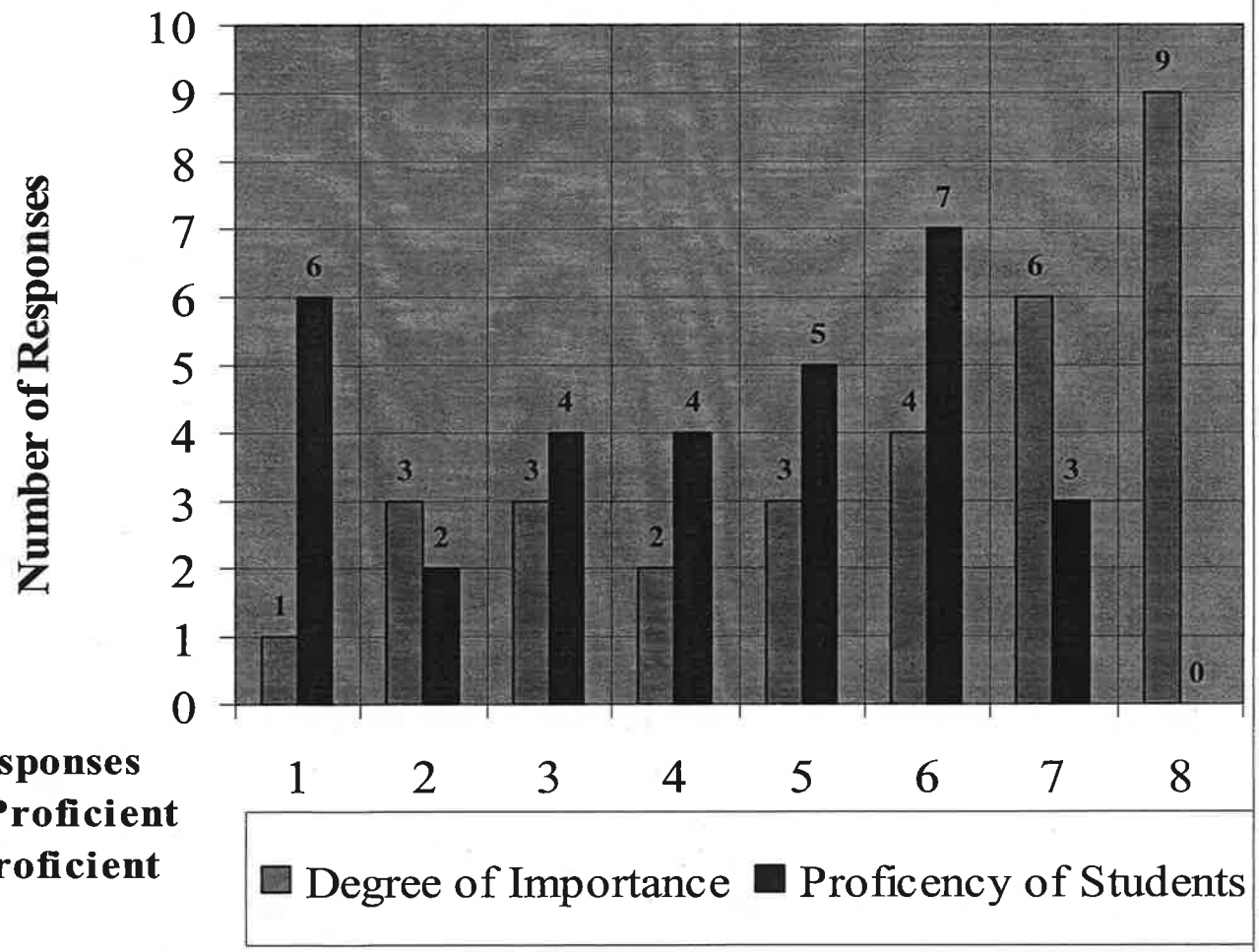


Figure 2.2 Identifying Factors Leading to Success in Music Theory-Understanding Dotted Rhythms



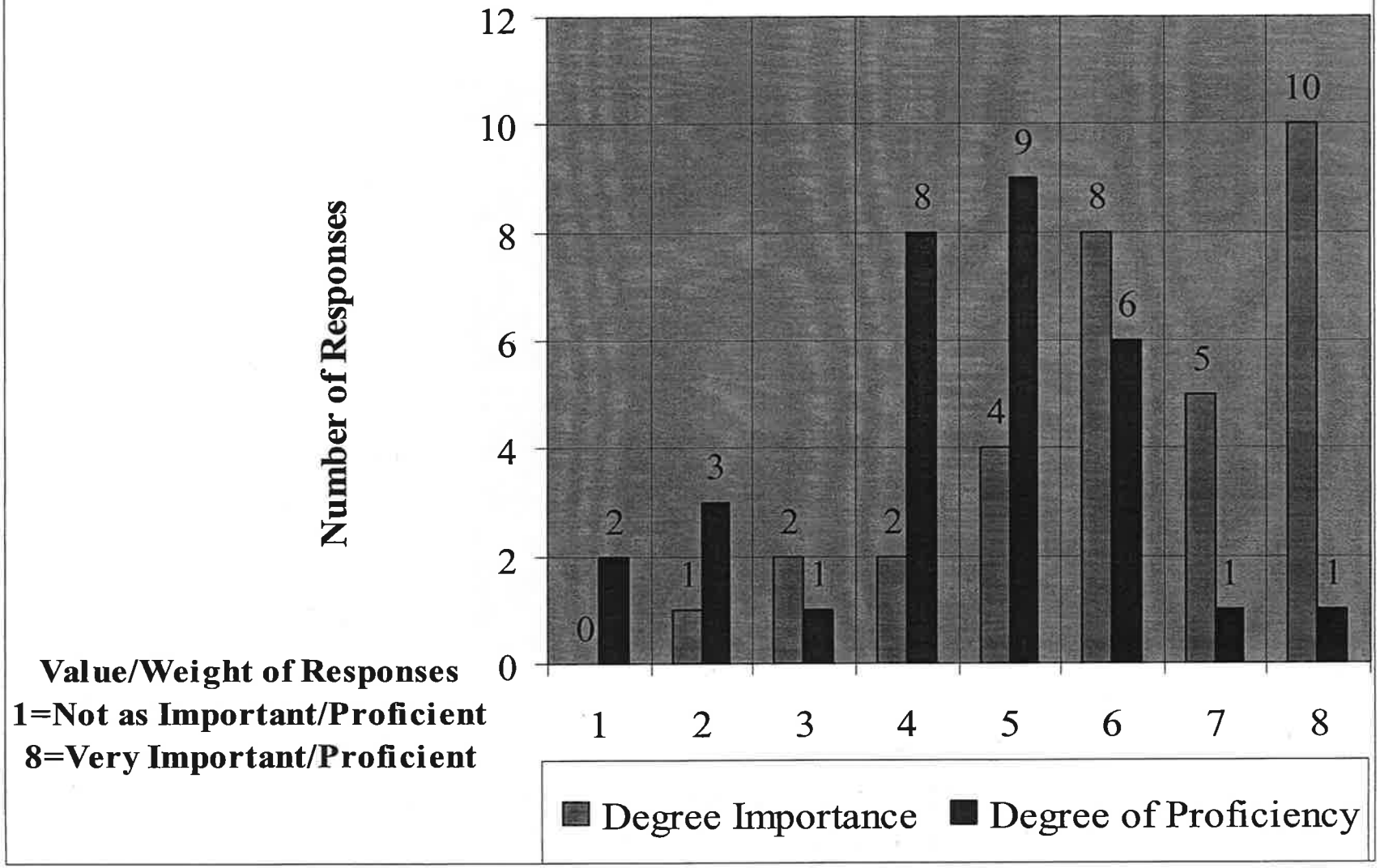
Value/Weight of Responses
1=Not as Important/Proficient
8=Very Important/Proficient

Figure 2.3 Identifying Factors Leading to Success in Music Theory-Identifying Enharmonic Tones



Value/Weight of Responses
1=Not As Important/Proficient
8=Very Important/Proficient

Figure 2.4 Identifying Factors Leading to Success in Music Theory-Form and Structure



Value/Weight of Responses
1=Not as Important/Proficient
8=Very Important/Proficient

Figure 2.5 Identifying Factors Leading to Success in Music Theory-Identifying Intervals

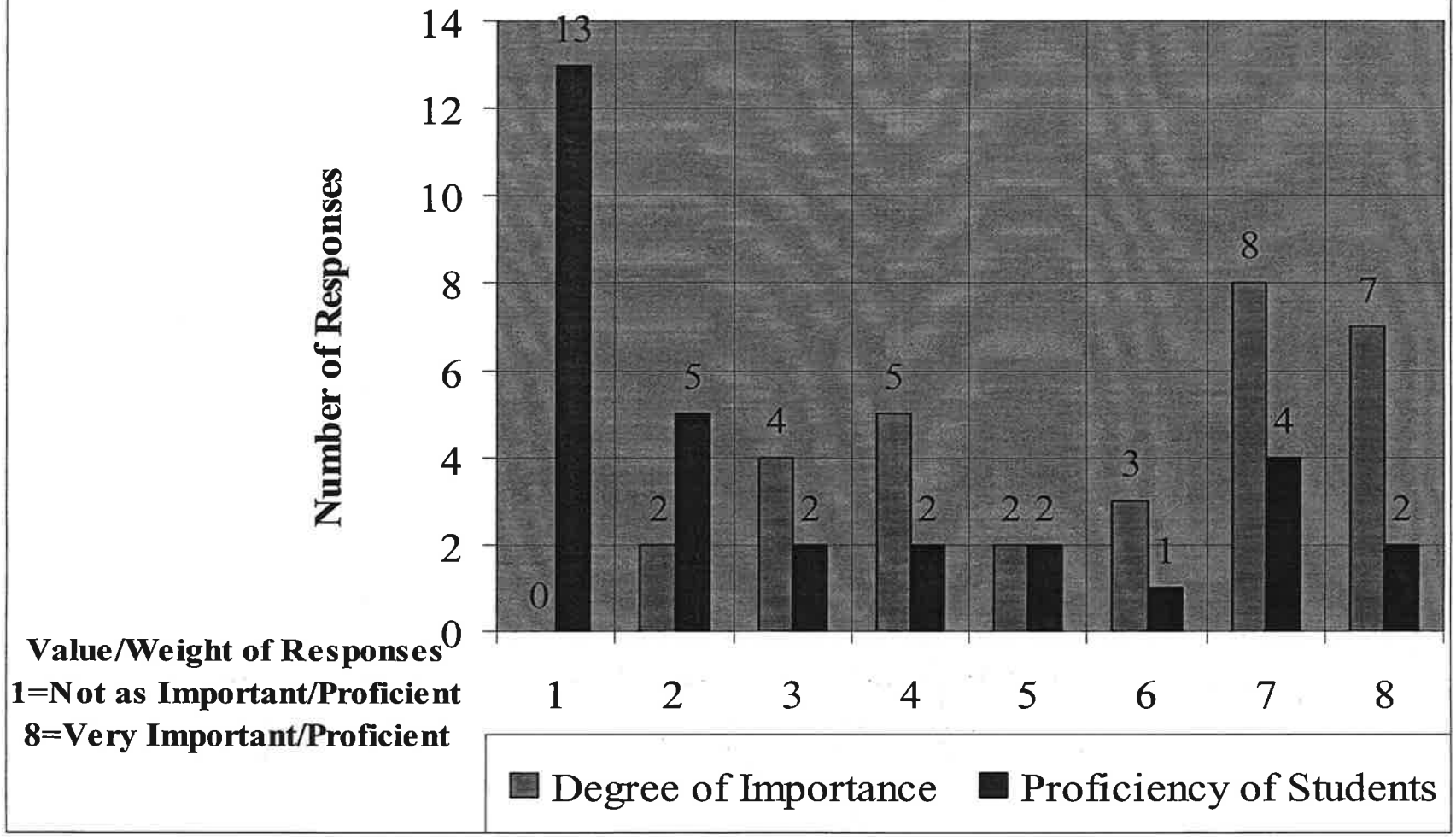


Figure 2.6 Identifying Factors Leading to Success in Music Theory-Identifying Triads

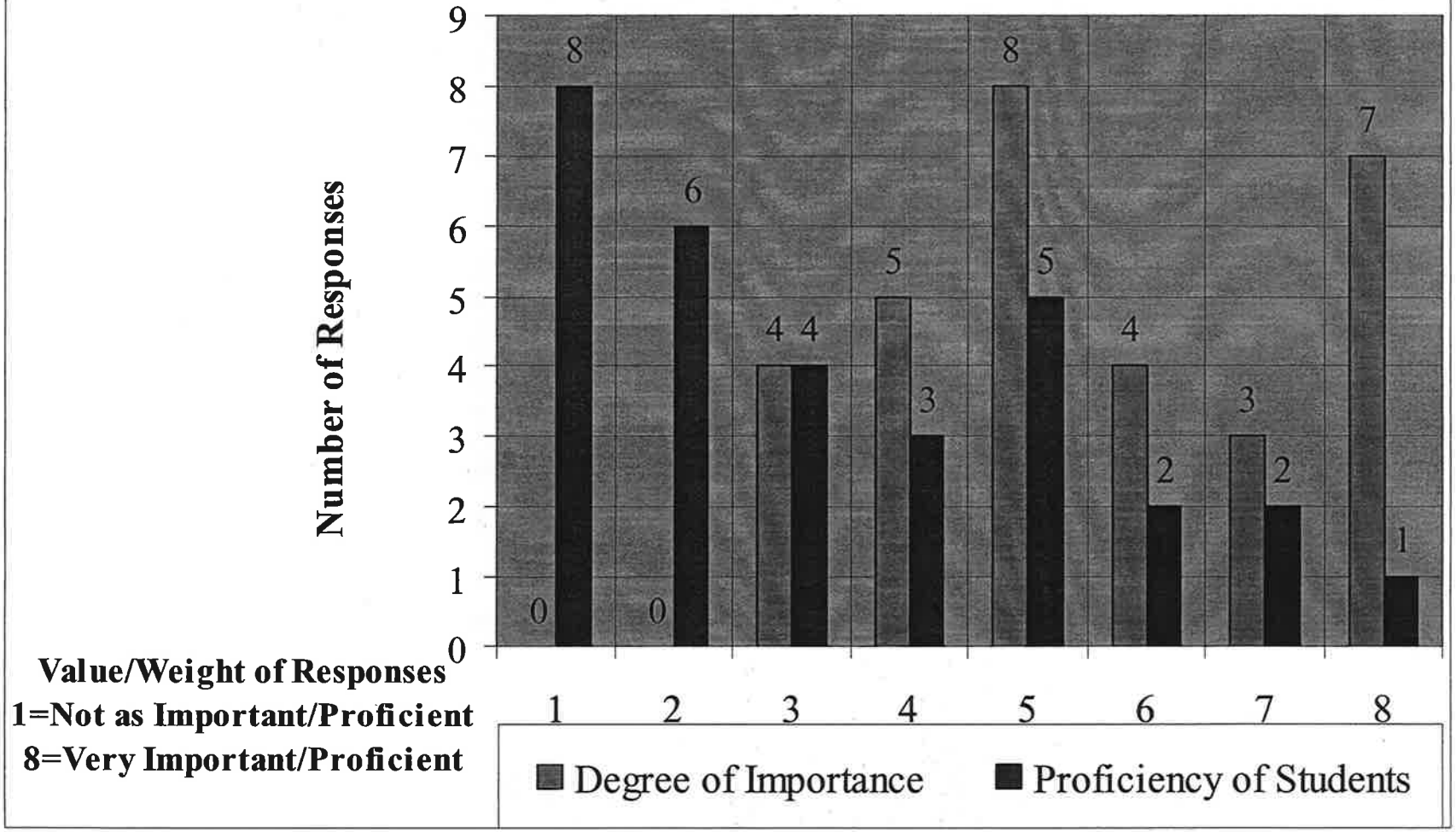
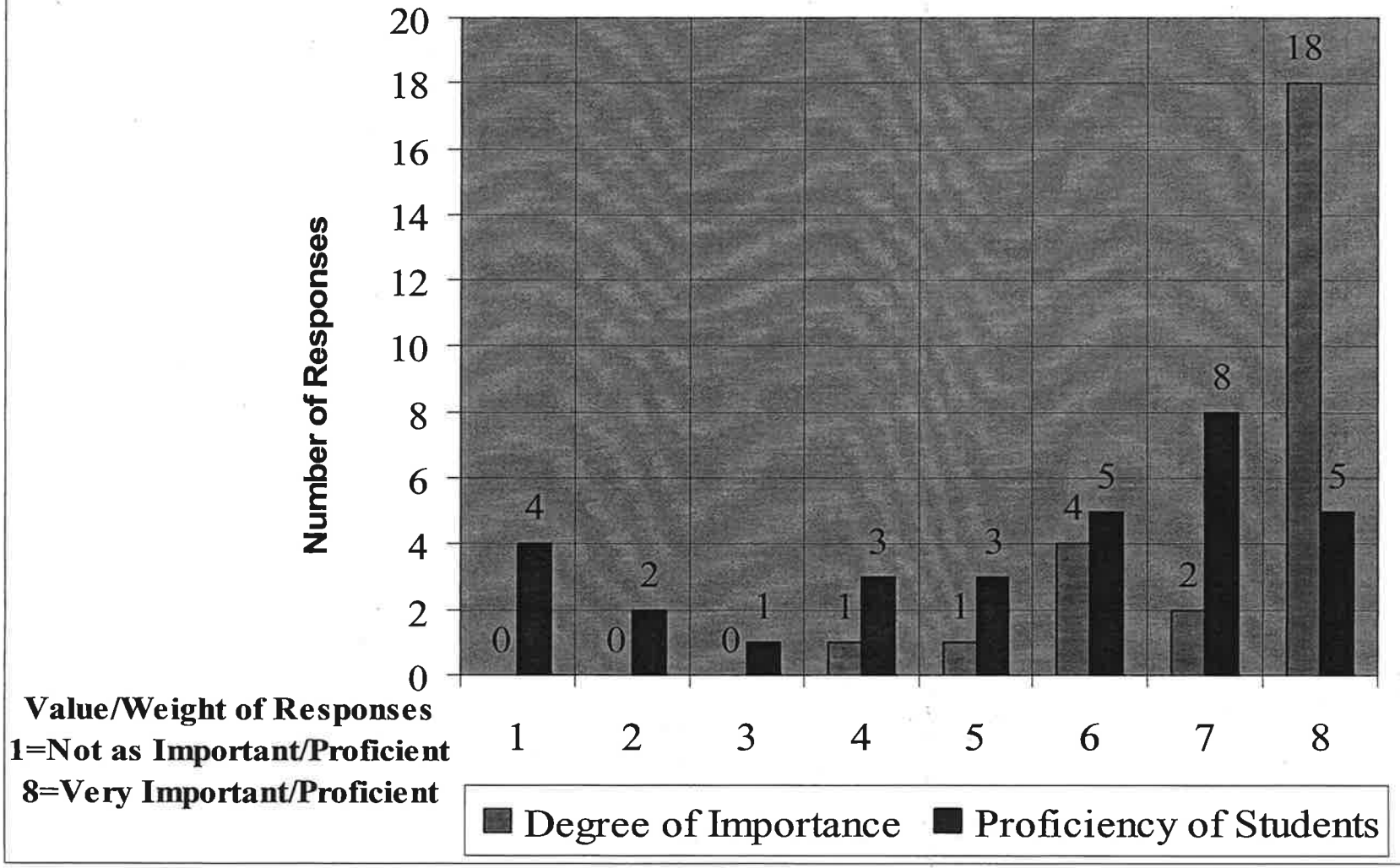


Figure 2.7 Identifying Factors Leading to Success in Music Theory-Understanding Key Signatures



4. Participating Directors

The age and experience of the participating directors varied. Two participating directors were under 32 years of age and had less than six years of teaching experience each. The remaining directors were between 38 and 44 years of age and had between 15 and 20 years of teaching experience. The director sample consisted of two male and two female directors (Figure 3.1).

Director Participants-School-Teaching Experience

Director	School	Years of Teaching Experience
Jason Atkinson	Elizabethtown Middle School	2.5 years
David Barkley	Tabor City Middle School	17.5 years
	Chadbourn Middle School	
Harriette Lovin	South View Middle School	20 years
Danielle Sabal	Pembroke Middle School	.5 years

Figure 3.1

The school that participated in the vocal section of the study experienced unforeseen delays in the entire school schedule. These schedule delays contributed factors that when incorporated into the overall program of scheduled activities for the school, increased the project duration to twelve weeks instead of the planned three weeks.

C. Designing and Implementing the Educator's Survey

In the pre-planning stage for this project, the writer met with his advisor and wrote each stage of the project on sticky notes. Discussion, re-arrangement, and placement of the notes on a poster board led to the selection of the best sequence of activities. The first phase of the program was a survey of area music educators (Appendix A). The writer examined several types of data collection instruments and chose to use the Likert scale format for the majority of the instrument. The scale range was 1-8 with eight indicating the high and one denoting the low end of the scale. An eight indicated the concept was considered important/students proficient and a one indicated the concept was not considered very important/students not proficient. The writer felt this selection of scale range gave the educators an amount of freedom without allowing so many choices that the differences in ratings would be subtle and more difficult for the educators to interpret and use.

In the first section of the survey, the writer selected seven areas of musical focus and asked the educators to rate the areas they felt were the most important for their students to know. In the second section of the survey, the writer asked the educators to rate the proficiency of their students in each of the same seven areas. The educators also gave examples of how they incorporated the use of music theory with their own ensembles. The writer analyzed the educator's example for ideas to be included in the implementation phase of the program. The educators concluded the survey by identifying his/her major areas of study. Examination of the surveys by the writer showed the representation of almost every major area of study of music education. Some educators volunteered the additional information. This information included if he/she did not currently teach a class of students and/or whether or not he/she currently teaches music theory.

The survey included an area where each educator could add his/her contact information and indicate if he/she would like to participate in the program that would follow. The sharing of this information was optional and voluntary. The writer noted that most educators chose to share their contact information, and 18 educators indicated an interest in participating in the program. The survey concluded by thanking the educators for their participation.

D. Designing, Implementing, and Scoring the Pre- and Post-Tests

1. Addressing the Concerns of Music Educators

The results of the music educator's survey revealed several areas of concern. The writer analyzed the survey results and constructed graphs that compared the ratings of importance to proficiency (Figures 2.1-2.7). In almost every area, the educators indicated a high value on concept knowledge, but felt their students were not proficient in that area.

To address the concerns of the educators directly, the writer determined the need for individual student evaluation to determine which areas specifically were growth areas for each student. The writer determined the best method to determine the data would be to design a series of tests (Appendix B). A pre-test was used to determine the baseline knowledge, and a post-test was used to determine the level of raw score growth when compared to the pre-test. Test validity was insured by three steps; the pre- and post-tests were identical to avert inaccurate results due to differences in testing format; the writer scored all of the tests to prevent inaccurate results due to grading interpretation; and after the pre-test, directors informed each student how many he/she missed, but not which specific questions. This last action informed the student of their baseline knowledge score but did not reveal answers that the student might remember without benefiting

from participation in the program. This indicated that score improvement was a result of the program, not just a good memory of the correct answers.

2. Fundamentals of Music Theory Sample Test A

The UNCP *Sample Test A* was re-examined and previously noted items taken into consideration (see Review of Related Literature). *Sample Test A* uses a variety of tools for data collection. These include fill in the blank, fill in the note value, add-a-note, and draw-a-note. The writer used matching, multiple-choice, fill in the blank, draw-a-note, and write the first letter of the answer as data-collection responses for the pre- and post-tests. The data-collection responses selected provided a variety of response tools as demonstrated by *Sample Test A*.

3. Grading

The grading of the pre- and post-tests assigned one point to each answer with the exception of two sections. These were the chromatic scale and articulation sections. The instrumental section of the chromatic scale asked the student to fill in six notes while the vocal section on the chromatic scale asked for 13 notes and the accompanying Solfege syllables. As this would contribute an inconsistency of final total answer points, the writer counted the entire chromatic section of either disciplines as six points. The writer gave partial credit for partially completed answers.

The articulation section of the pre- and post-test also bears note on grading procedure. In this section, students identified each note that had the selected articulation by writing the given choices under the given notes. This section showed a sample of written music that contained both special and regularly articulated notes intermixed. Students chose from the articulations

accent, staccato, slur, and tie. Here every note was a possible answer, as students had to identify which notes had special articulation and select the appropriate articulation. The writer found that on the pre-test, some students wrote articulation answers under notes that did not have special articulation. In the grading process, identifying notes as articulated that did not have the indicated articulation were marked incorrect. Additionally, notes that had incorrect articulation choices were also marked incorrect. In this section, the writer decided that identifying a note as having special articulation was part of identifying what the special articulation was.

The writer included a resource graphic on the back of the last page of the tests as an option for student use. This picture was of a section of the piano keyboard with the black keys identified by the two enharmonic names written above each black key. The students had to identify the white keys on the piano keyboard on their own. The writer chose to include this tool on the pre- and the post-tests following the example of State standardized math tests where students have access to mathematical formulas, as well as to give the students a reminder of material discussed in the program.

In the final grading process, the writer counted the total number the student missed. This was the number recorded. The tests contained 100 possible points/answers. The pre-test scores determined base line knowledge, and the post-test scores measured the amount of raw score growth by comparison to the pre-test scores (Figures 4.1-4.5.4).

The Sequential Theory Training Program Test Results

Figure 4.1

Elizabethtown
Middle School
7th Grade

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-69	-42	27	9.9
2	-74	-66	8	
3	-62	-59	3	
4	-69	-66	3	
5	-45	-36	9	
6	-68	-34	34	
7	-54	-54	0	
8	-77	-71	6	
9	-44	-34	10	
10	-60	NA	NA	
11	-72	-73	-1	
12	-60	NA	NA	

NA=not available

The Sequential Theory Training Program Test Results

Figure
4.1.2

Elizabethtown
Middle School
8th Grade

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-49	-37	12	5.91
2	-31	-31	0	
3	-44	-24	20	
4	-41	NA	NA	
5	-68	-52	16	
6	-44	-47	-3	
7	-32	-28	4	
8	-25	-20	5	
9	-39	-51	-12	
10	-52	-27	25	
11	-31	NA	NA	
12	-44	-59	-15	
13	-57	-43	14	
14	-66	NA	NA	
15	-61	-56	5	
16	NA	-37	NA	

NA=not available

The Sequential Theory Training Program Test Results

Figure 4.2

Pembroke
Middle School
1st Year Students

Students	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-61	-41	20	6.18
2	NA	-60	NA	
3	NA	-57	NA	
4	-77	-57	20	
5	-71	-68	3	
6	-76	-56	20	
7	-76	-62	14	
8	-64	-68	-4	
9	-65	-70	-5	
10	-15	-7	8	
11	-56	-52	4	
12	NA	-68	NA	
13	-73	-72	1	
14	-15	-28	-13	
15	-66	NA	NA	
16	-54	NA	NA	
17	NA	-47	NA	
18	-60	NA	NA	

NA=not available

The Sequential Theory Training Program Test Results

Figure 4.2.1

Pembroke
Middle School
7th Grade

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-77	-55	22	15.9
2	-37	-21	16	
3	-69	-43	26	
4	NA	-32	NA	
5	-67	-32	35	
6	NA	-49	NA	
7	-36	-21	15	
8	-47	-50	-3	
9	-23	-20	3	
10	-59	-54	5	
11	NA	-31	NA	
12	-64	-47	20	
13	-51	-27	24	
14	-41	-10	31	
15	-14	-4	10	
16	-69	-56	13	
17	-64	-32	32	
18	-30	NA	NA	
19	-56	-33	23	
20	-56	-56	0	
21	-75	-66	9	
22	-54	-44	10	
23	-66	NA	NA	
24	-63	-48	15	
25	-63	-36	27	
26	-57	-47	10	
27	-36	-18	18	
28	-50	NA	NA	
29	-67	-62	5	
30	-68	-52	16	
31	-67	-59	8	
32	-67	-28	39	
33	-60	-53	7	
34	-49	-52	-3	
35	-64	-48	16	
36	-61	-49	12	
37	-64	-30	34	
38	-78	-75	3	
39	-44	-16	28	
40	NA	-34	NA	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.2.2

Pembroke
Middle School
8th Grade

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-70	-70	0	19.2
2	NA	-56	NA	
3	-59	-36	23	
4	-77	-47	30	
5	-52	-27	25	
6	-49	-26	23	
7	-39	-17	22	
8	NA	-24	NA	
9	-65	-60	5	
10	-39	-8	31	
11	-76	-64	12	
12	NA	-13	NA	
13	-57	-36	21	
14	-66	-37	29	
15	-78	-76	2	
16	NA	-74	NA	
17	-65	-21	44	
18	NA	-68	NA	
19	-38	-29	9	
20	-73	NA	NA	
21	-50	-26	24	
22	-50	-34	16	
23	-60	-22	38	
24	-22	-8	14	
25	-61	-31	30	
26	NA	-75	NA	
27	NA	-23	NA	
28	-34	-26	8	
29	-71	-61	10	
30	NA	-13	NA	
31	-58	-44	14	
32	NA	-52	NA	
33	-60	-52	8	
34	-58	-28	30	
35	-32	-20	12	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.3

Tabor City
Middle School
7th Grade

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-66	-66	0	21.84
2	-31	-17	14	
3	-63	-48	15	
4	-70	-37	33	
5	-27	-16	9	
6	-59	-48	11	
7	-41	-6	35	
8	-44	-38	6	
9	-60	-23	37	
10	-46	-28	18	
11	-46	-6	40	
12	-44	-14	30	
13	-54	-38	16	
14	-63	-7	56	
15	-68	-19	49	
16	-7	-6	1	
17	-62	-52	10	
18	-51	-31	20	
19	-56	-41	15	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.3.1

Tabor City
Middle School
8th Grade

Student Number	Pre-Test	Post-Test	Gain	Class Avg. Raw Score Gain
1	-69	-37	32	13.17
2	-27	-5	22	
3	-43	-35	8	
4	-79	-74	5	
5	-61	-54	7	
6	-11	-2	9	
7	-57	-44	13	
8	-49	-28	21	
9	-49	-31	18	
10	-36	-7	29	
11	-35	-24	9	
12	-69	-66	6	
13	-40	-31	9	
14	-53	-20	33	
15	-14	-5	9	
16	-49	-25	24	
17	-21	-9	12	
18	-38	-15	23	
19	-1	0	1	
20	-11	-12	-1	
21	-3	-3	0	
22	-51	-42	9	
23	-42	-37	5	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.4

Chadbourn
Middle School
First-Year Students

Student Numbers	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-51	-15	36	15.2
2	-73	-62	11	
3	-57	-35	22	
4	-73	-63	10	
5	-70	-53	17	
6	-71	-70	1	
7	-70	-62	8	
8	-46	-19	27	
9	-77	-77	0	
10	-65	-45	20	

The Sequential Theory Training Program Test Results

Figure 4.4.1

Chadbourn
Middle School
2nd Year Students

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-69	-48	21	18.41
2	-78	-76	2	
3	-74	-47	27	
4	-61	-29	32	
5	-75	-62	13	
6	-34	-14	20	
7	-60	-18	42	
8	-67	-42	25	
9	-73	-66	7	
10	-69	-54	15	
11	-55	-45	10	
12	-93	-89	4	
13	-69	-35	34	
14	-56	-43	13	
15	-43	-32	11	
16	-15	6	9	
17	-66	-38	28	
18	NA	-40	NA	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.4.2

Chadbourn Middle School 3rd Year Students

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-64	-52	12	18.32
2	-62	-51	11	
3	-67	-48	19	
4	-73	-63	10	
5	-31	-8	23	
6	-44	-20	24	
7	-75	-73	5	
8	-51	-22	29	
9	-61	-55	6	
10	-79	-70	9	
11	-70	-67	3	
12	-34	-10	24	
13	-70	-43	27	
14	-57	-33	24	
15	-61	-30	31	
16	-23	-13	10	
17	-40	-37	3	
18	-57	-60	-3	
19	NA	-40	NA	
20	-69	-67	2	
21	-71	-27	44	
22	-54	-23	31	
23	NA	-25	NA	
24	-31	-23	8	
25	-61	-23	38	
26	-34	-10	24	
27	-36	-6	30	
28	-56	-40	16	
29	-57	-46	11	
30	-68	-35	33	
31	-49	-38	11	
32	-68	-35	33	
33	-51	-31	20	NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.5.1

South View
Middle School
7th Grade
3rd Period

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-71	-64	7	24.4
2	-60	-42	18	
3	-69	-54	15	
4	-45	-29	16	
5	-55	-43	12	
6	-48	-7	41	
7	-69	-55	14	
8	-67	NA	NA	
9	-56	-19	47	
10	-52	-20	32	
11	-72	-46	26	
12	-68	-53	15	
13	-56	-24	32	
14	-66	-10	56	
15	-39	-11	28	
16	-54	-52	2	
17	-83	-35	48	
18	-78	-46	32	
19	-60	NA	NA	
20	-78	-64	14	
21	-68	-36	32	
22	-78	-53	25	
23	-72	-61	12	
24	-44	-12	32	
25	-54	-53	1	
26	-78	-62	16	
27	-82	-72	10	
28	-36	0	36	
29	-59	NA	NA	
30	-55	-14	41	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.5.2

South View
Middle School
7th Grade -4th Period

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-80	-46	34	20.03
2	-75	-75	0	
3	-73	-66	7	
4	-58	-19	39	
5	-68	-51	17	
6	-56	-32	24	
7	-64	-62	2	
8	-62	-33	29	
9	-71	-45	26	
10	-83	-80	3	
11	-69	-39	30	
12	-83	-55	28	
13	-42	-20	22	
14	-43	-68	-25	
15	-71	-19	52	
16	-73	-41	32	
17	-63	-16	47	
18	-74	-52	22	
19	-61	-61	0	
20	-74	-47	27	
21	-68	-39	29	
22	-83	-65	18	
23	-78	-60	18	
24	-68	-48	20	
25	-58	-26	32	
26	-79	-71	8	
27	-60	-60	0	

The Sequential Theory Training Program Test Results

Figure 4.5.3

South View
Middle School 8th Grade
Late Starting Group

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-34	-18	16	24.25
2	-25	NA	NA	
3	-44	-9	35	
4	-67	-68	-1	
5	-56	-39	17	
6	-80	-69	11	
7	-71	-39	32	
8	-65	NA	NA	
9	-64	-32	32	
10	-64	-17	47	
11	-74	-56	18	
12	-54	-31	23	
13	-73	-48	25	
14	-39	-20	19	
15	-43	-29	14	
16	-33	-4	29	
17	-50	-21	29	
18	-65	-30	35	
19	-41	-22	19	
20	-55	-54	1	
21	-35	NA	NA	
22	-59	-22	37	
23	-37	-10	27	
24	-67	-59	8	
25	-56	-14	42	
26	-6	-5	1	
27	-69	-18	51	
28	-53	-42	11	
29	-72	-9	63	
30	-29	-12	17	
31	-57	-36	21	

NA=Not Available

The Sequential Theory Training Program Test Results

Figure 4.5.4

South View
Middle School
8th Grade

Student Number	Pre-test	Post-test	Gain	Class Avg. Raw Score Gain
1	-11	-1	10	20.88
2	-54	-49	5	
3	-52	-48	4	
4	-37	-26	11	
5	-42	-1	41	
6	-13	0	13	
7	-29	-3	26	
8	-46	-29	23	
9	-61	-31	30	
10	-63	-42	21	
11	-27	-2	25	
12	-61	-45	16	
13	-53	-36	17	
14	-34	-3	31	
15	-46	-9	35	
16	-61	-25	36	
17	-26	-16	10	
18	-45	-19	26	
19	-21	-3	18	
20	-58	-18	40	
21	-33	-6	27	
22	-53	-19	34	
23	-20	-6	14	
24	-60	-61	-1	
25	-11	-1	10	
26	NA	-32	NA	
27	NA	-36	NA	
28	NA	-58	NA	
29	NA	-51	NA	
30	NA	-43	NA	
31	NA	-10	NA	
32	NA	-60	NA	
33	NA	-50	NA	
34	NA	-52	NA	
35	NA	-55	NA	
36	NA	-29	NA	NA=Not Available

E. Designing the *STT Manual* Student Workbook

In designing the *STT* student workbook (Appendix F), the writer considered all of the previously gathered data with the exception of the pre-test scores, as this data had not been collected. The first step was to decide on a title for the program. Discussion of possibilities with Dr. Byars led to the development of the program title and the idea of using the train theme for organization and design of the cover. The writer located several graphics of trains and types of railroad cars on the internet. The use of Microsoft Paint, screen capture, and photo editor software programs in the resizing, reversing, color adjustment, tying together, etc. led to the final thematic picture for the cover page. The final *STT* product used covers of bright and different colors, one color for each participating school, with matching back cover. One of the writer's two schools would use the covers that remained after the distribution of the workbooks to each school. The writer felt that the use of brightly colored covers instead of plain black-and-white would be more appealing to the students. The writer chose to bind the workbooks with spiral-comb binders. These binders made the workbook more durable and lasting than staple bindings, and seemed to contribute the feeling of importance and ownership to the writer's students.

The writer determined the student workbook would include the use of visual elements inter-mixed with written information. Due to printing costs, the reproductions of the workbook were in black and white. Musical and non-musical pictures contributed to the flow of information and the designs of the lessons. One example from the workbook was a picture of stairs to give a mental image of the notes of a scale ascending.

The student workbook lessons used a variety of layout designs. The design of some lessons used a sentence or two followed by a picture, others had paragraphs with symbols or terms intermingled in the information. All lessons concluded with music theory exercises of

different types, but not the same type at the end of each lesson. The lesson designs addressed a variety of learning styles. Gardner (1993) developed the theory that there is a variety of learning style types, often within a single classroom. This theory identifies the types of learners as visual/spatial, auditory/musical, verbal/linguistic, kinesthetic/body, mathematical, intrapersonal, interpersonal, and naturalistic. The designs of the workbook lessons and activities addressed each of these types of learners at different times, although none of the workbook lessons designs addressed all eight learning styles in each lesson without adaptation by the participating director.

The writer decided it was important to establish an understanding of commonly used musical terms and symbols before the introduction of advanced concepts. This concept of building upon a previously established concept allows the sequence of activities to flow to a final lesson in the blues scale that incorporated concepts from previous lessons. The analysis of the method books revealed that they also follow the progression of flowing from the simple to the more complex. A list of concepts the program addressed is located in Figure 5.1.

Figure 5.1

Music Symbols/Concepts Taught in the *STT* Project

Symbols
staff
clef signs
4/4, 2/4, 6/8 time signatures
whole note
whole rest
half note
half rest
quarter note
quarter rest
repeat sign
common time
fermata
tie
sharp
flat
key signatures for C, F, Bb, G, and D
eighth notes
dotted quarter note
dynamics-f, mf, mp, and p
accent
crescendo and decrescendo
ritardando
piano keyboard
staccato
slur
dotted quarter note
double bar (end bar)

Concepts
major scale pattern/writing a major scale
key signature/how to recognize what key it is
chromatic scale
enharmonic notes
note names
repeat sign
sharp, flat, natural
whole step/half step
blues scale

F. Designing the Student Activities and Teacher's Manual

The *STT Manual* Teacher's Edition (Appendix E) focused on the implementation of the activities. Included in the manual were instructions on how each of the theory lessons was to be implemented into a classroom activity, how the lesson was to be integrated into the daily performance repertoire, specific content-related material, an answer key, a "scale slider tool," and a picture that the director could cut out and use with one of the lesson activities. The Teacher's Manual also included a copy of the student workbook so the director could see exactly what the student was seeing. The writer determined to use this inclusion of the student manual following the example used by all of the method books director's editions examined in the literature review. In addition, the writer has found from personal experience that having a copy of the student text is useful in lesson planning.

The design of student activities considered all of the North Carolina Standard Course of Study (NCSCOS) competency goals and standards; the eight learning styles identified by Gardner; the review of related literature; the concepts identified by the educator's survey; and interviews with the participating directors. The writer realized that designing a program that would be able to meet each of the NCSCOS goals, address all eight identified learning styles, meet each educator- identified goal, and use commonly available the resources for implementation was a difficult task. The writer determined all of the educator-identified goals were too numerous to address in a program of this nature and that some concepts would have to be addressed in a follow-up program. The design of the activities selected by the writer also considered participants in the program would be in both the vocal and instrumental disciplines.

The instructions to the participating directors for implementation gave the freedom to adapt each lesson for their individual classrooms dynamics and individual teaching style. The

belief was that a forced activity or a forced teaching style would not be enjoyable for the teacher, and from the writer's experience, an enjoyable lesson presentation allows the student to learn with more ease. The writer also believed the individual directors would be aware of any special needs of students in his/her classrooms, and make needed instructional modifications to accommodate these needs.

G. Implementing the Activities

In the implementation phase of the program, each director received several specific instructions to adjust the activities to accommodate any special needs that he/she believed would assist their lesson presentation. The writer determined that the teachers who worked with each class on a day-to-day basis would know the best way to implement the activities. This allowed each activity to be adapted to the unique learning needs of the individual students. In addition, the schedule was set as a guide for the program, with variable scheduling.

Each lesson provided daily activities that reinforced the music theory lessons from the workbook. The focus of the activities was to develop students' understanding of scales and of scale relationships to music. Review strategies included oral, written, and dry erase board reinforcement.

Another strategy of the program was to avoid students wasting time finding the area of focus in the repertoire. When identifying concepts, notes, and symbols within a piece of the performing repertoire, the teachers concentrated on areas that were easy to locate and find. Teachers used examples that students could identify quickly, such as the first six notes, the last six notes, or section A first note.

The program implementation included the use of student and teacher read-aloud activities. Reading aloud involved students actively, added variation, and gave the opportunity to practice oral language skills. The teachers varied who and how many students read aloud each day. The teachers also read aloud themselves on some days.

The teachers used visual cues, such as a quick show of hands, to indicate student success. Several lessons incorporated the exchange of papers to speed up the evaluation of daily exercises. Teachers also listed on the board the top five students who scored the best in each class to provide personal student recognition. Additional rewards were at the discretion of the individual teacher.

The most important part of the activities was the integration of the concepts into the performing repertoire. The daily *STT* learning exercises were not designed to be stand-alone activities. The structure of the daily lesson plans included time to identify and integrate the concept(s) directly into the repertoire piece(s). When the students saw that the *STT* concepts had direct application to the literature they were learning, they derived more meaning from the concepts and their retention of the concepts increased. This is supported by the findings of Bigge and Shermis (1992, p. 91) who wrote "Furthermore, the more meaningful the learned material, the longer it tends to be retained." When concepts shown have direct meaning to the student, the application will be more beneficial. Each teacher made necessary time adjustments to the lesson plans to include rehearsal that implemented the target concepts.

VI. Conclusions

1. Discussion/Summary

A comparison of pre- and post-test scores indicates that the majority of the students improved. The results show that Elizabethtown Middle School students improved an average of 7.905 raw score points; Pembroke Middle School students improved an average of 13.76 points; Chadbourn Middle School students improved an average of 17.31 points; Tabor City Middle School students improved an average of 17.5 points; and South View Middle School students improved an average of 22.39 points. The mean raw score improvement of all students (N=348) was 16.685 points.

The test score results lead to several conclusions. First, with regard to the test scores, the implementation of a program to enhance music theory skills through integrated learning exercises produced positive gains (Figures 4.1-4.5 and Appendix G) for the majority of the students. Of the 348 students in the sample, 325 showed improvement on the post-test, 10 scores remained the same, and 13 demonstrated negative results. Second, the duration of the program was a factor. The school that finished the program in the least amount of time had the least improved scores, and the school that took the longest to complete the program showed the most improved scores. This would support the recommendations of the participating directors to spread the program out over several weeks, possibly a semester. Third, the more prior teaching experience the participating director had, the more improvement their students made. The score improvement positively correlated to the teaching experience of the directors (Figure 6.1). Students whose directors had been teaching three years or less showed less improved scores than the directors with 15 or more years of teaching experience. This could lead to the conclusion

that experienced teachers implemented the program more effectively than less experienced teachers.

Director Participants-Teaching Experience-Student Test Scores

Director	School	Years of Experience	Avg. Student Raw Score Gain
Jason Atkinson	Elizabethtown Middle School	2.5 years	9.9, 5.91
David Barkley	Tabor City Middle School	17.5 years	21.84, 13.71
	Chadbourn Middle School		15.2, 18.41, 18.32
Harriette Lovin	South View Middle School	20 years	24.4, 20.03, 24.25, 20.88
Danielle Sabal	Pembroke Middle School	.5 years	6.18, 15.9, 19.2

Figure 6.1

In post-program interviews, students indicated reasons they felt they improved and reasons they felt they did not improve more than they did. Their reasons for improvement included the *STT* manual itself, the integrated activities, and an increased interest level due to the uniqueness of the program. From their responses, the writer draws two conclusions: the students felt integrating the activities into the performing repertoire helped them to learn and that students enjoyed "unusual" learning activities. Students reported that they did not improve due to sickness, absenteeism, arguing with friends earlier on test day, tired/sleepy, did not study, and/or they did not apply themselves. All of the student-given responses were independent and confidential. An additional conclusion is that no matter how different, unique, or well designed a

program is, improving the test scores of every student is difficult due to the many complexities that contribute to student learning.

The last two conclusions reflect the complexities of the evaluation process. If students performed well on their pre-test, they had less room for possible improvement than those who scored poorly on the pre-test. For instance, if a student missed only ten questions on the pre-test, they could only improve a possible ten points and therefore would have brought their overall class average improvement down. If a student missed less than the average raw score improvement rate in his/her class, this student's score would actually hurt the class average improvement. Second, the casual observer might conclude that the more a student already knew about music, the more he/she would benefit from a program of this nature. The first year students (sixth graders) that participated in the program did improve, but they did not show the degree of improvement of the second and third year students. However, the grade level that showed the most growth varied from school to school. One grade level did not stand out in terms of improvement. The eighth grade students (most had more exposure to music instruction) did not always show more improvement than the seventh grade students who had a year less experience. This finding would indicate that student's prior musical knowledge was not a factor in program effectiveness.

The program concluded with a survey of the participating directors (Appendix G). The survey contained five questions using a Likert scale to rate each question. According to the survey results, the program received ratings of Superior or Excellent in every area from the three instrumental music directors, and ratings of Excellent and Good from the vocal music director. The vocal director felt that some of the activities and symbols were more useful to instrumental programs than to vocal programs. All directors indicated an interest in implementing the

program again in the coming school year and participating in a follow-up study. Additional comments were all positive. The directors said both they and their students enjoyed the program. Suggestions for improvement included beginning the program earlier in the school year and spreading the activities throughout a semester.

2. Areas the Program Did Not Address

During the planning stage of this program, the writer realized there were many concepts and symbols that were beyond the scope of this project. The list of concepts addressed in method books one to three (Figures 1.1-1.6) shows there are many musical concepts, too many to address in three weeks. Concepts outside of the scope of this project include $\frac{6}{8}$ time note values and rhythms that incorporated the use of sixteenth notes and sixteenth rests that were used in the UNCP *Sample Test A* (Appendix D). The writer recommends that these concepts appear in a follow-up project.

3. Recommendations

In the follow-up director survey (Appendix G), two directors offered the suggestion to change the timeline used by the project. One of these two directors planned to implement the *STT* activities over a two-to-three month period next year. This director felt the activities and strategies were appropriate, but a three-week implementation schedule made the program too condensed. The other of the two directors desired to implement the project earlier in the school year next year. The program began after Christmas when a plethora of school activities led the director to conclude, "there was just too much going on at one time." The recommendation of

the writer is that teachers adapt time schedules of *STT* activities and project duration to the schedule of their school.

The writer determined that, as educators, we cannot assume that students will be able to identify and find music symbols that taught previously in the classroom setting. The recommendations are for teachers to point out these symbols in the literature immediately after teaching the symbol and to reinforce the information during subsequent class periods. This will help students to correlate symbol/fact to the occurrence/application of that symbol. The writer also recommends that, if a teacher uses student help to assemble multi-page workbooks, the teacher use only a limited number of responsible students to avoid workbook assembling errors.

In follow-up projects, the writer suggests that the project designer use a different method of grading for evaluation. This program measured the number of questions the student missed and compared pre- to post-test scores. While this in itself is a source of data, the recommendation is that subsequent programs use a percentile rating for the final evaluation process. Comparison of pre- and post-test scores do provide one type of usable data, but the students who missed fewer than the class raw score average improvement on the pre-test will have scores that will diminish the final average. One conclusion is that showing percentile of improvement provides a more accurate measure of comparable growth.

In the examination and comparison of method books, the writer determined that there is no single text that teaches every musical concept. The writer recommends that teachers examine the method book analysis charts (Figures 1.1-1.6) to determine which text to use for each grade level of instruction they teach. In switching to a different method book series, there may be concept gaps and overlapping, but a different method book may cover needed concepts and goals better than continuing with the one currently used. The writer determined that ultimately, the

teacher's presentation and use of the text is what makes the biggest difference in student learning.

The writer recommends that teachers consider designing and implementing research programs of their own to test their own theories on education. The writer discovered that it was very rewarding to determine the amount of progress students made by measuring their knowledge before and after program implementation. The lessons one can learn from designing one's own personal program can provide valuable insight into the educational process. In the process of design, the teacher may discover, as did the writer, that it is not the "approach" that makes the biggest difference in student learning. The answer may lie in the design implementation and application, which breathe the life into the music.

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Appendix A

Identifying Factors Leading to Success in Music Theory

Identifying Factors Leading to Success in Music Theory

1. On a scale of 1-8 (8 being the most important), **rate** the following music theory skills in order of importance. Circle one for each skill (you may use each number more than once).
   - being able to construct scales based on a root tone 1 2 3 4 5 6 7 8
   - being able to recognize the form and structure of a piece 1 2 3 4 5 6 7 8
   - understanding dotted rhythms 1 2 3 4 5 6 7 8
   - identifying key signatures 1 2 3 4 5 6 7 8
   - identifying and understanding enharmonic tones 1 2 3 4 5 6 7 8
   - identifying triads (major, minor, diminished, augmented) 1 2 3 4 5 6 7 8
   - identifying intervals by quality and number (ex. major 3rd) 1 2 3 4 5 6 7 8
2. **Rate** the above areas with regard to the proficiency development of your students. (8=proficient; 1=not very proficient; you may use each number more than once)
   - being able to construct scales based on a root tone 1 2 3 4 5 6 7 8
   - being able to recognize the form and structure of a piece 1 2 3 4 5 6 7 8
   - understanding dotted rhythms 1 2 3 4 5 6 7 8
   - identifying key signatures 1 2 3 4 5 6 7 8
   - identifying and understanding enharmonic tones 1 2 3 4 5 6 7 8
   - identifying triads (major, minor, diminished, augmented) 1 2 3 4 5 6 7 8
   - identifying intervals by quality and number (ex. major 3rd) 1 2 3 4 5 6 7 8
3. How do you incorporate the teaching of music theory into your ensemble class? _____

   _____

   _____

   _____

3. What is (are, were) your area(s) of major study in college? (check all that apply) ___brass ___voice ___woodwinds ___ percussion ___strings ___keyboard ___theory ___other (list)_____

Thank you for your participation. Your valuable input will help us to address the academic concerns of our students here at UNCP.

The Music Department and David Barkley, Adjunct Faculty, Graduate Student.

Appendix B

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises Pre-Test

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises Pre-Test

I. Matching-Identify the Music Symbol

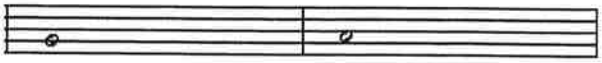
1. _____ quarter notes
2. _____ staff
3. _____ half notes
4. _____ whole notes
5. _____ quarter rest
6. _____ whole rest
7. _____ treble clef sign
8. _____ bass clef sign
9. _____ half rest

A. 

B. 

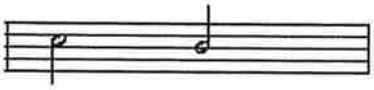
C. 

D. 

E. 

F. 

G. 

H 

J. 

II. Multiple Choice (circle the best answer)

10. $\frac{4}{4}$, $\frac{2}{4}$, $\frac{6}{8}$ a) treble clef signs b) 4 beat rest c) bass clef sign d) time signatures e) none of these

11.  a) end bar b) repeat sign c) measure d) the music staff e) none of these

12.  a) end bar b) repeat sign c) measure d) the music staff e) none of these

13.  a) whole notes b) quarter notes c) sixteenth notes d) eighth notes e) staccato notes

14.  a) eighth notes b) quarter notes c) slurred notes d) whole notes e) tied notes

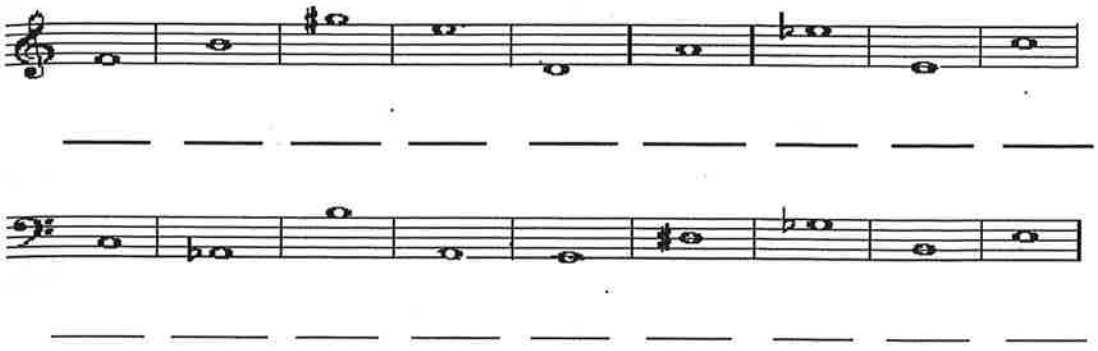
15. C a) common time b) cut time c) alla breve d) $\frac{2}{4}$ time e) none of these

16.  a) eighth note b) staccato note c) sixteenth note d) dotted quarter note e) none of these

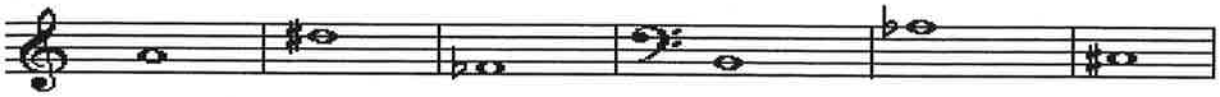
17.  a) slurred note b) dotted quarter note c) staccato note d) eighth note e) none of these

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises-Pretest

III. Write the letter name under each note including its sharp or flat when necessary.

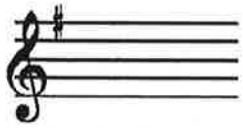


IV. Draw a note beside the written note ½ step **higher** than the written one.

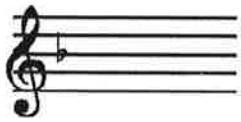


V. Starting on the note C, write a major scale in whole notes. Add the key signature if needed.

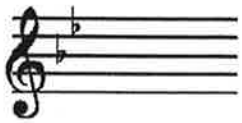
VI. Write the letter name of the scale and the key to which it belongs in the blank.



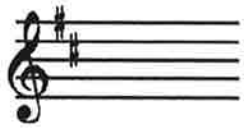
1. _____



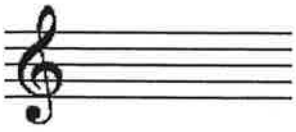
2. _____



3. _____



4. _____



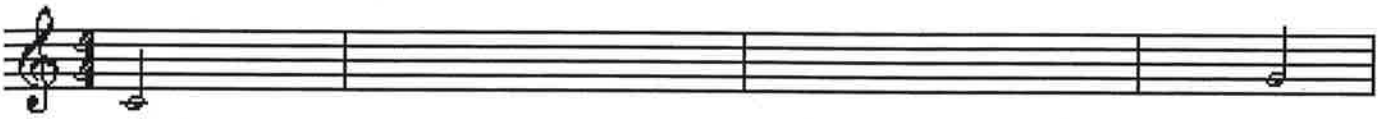
5. _____

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises-Pretest

VII. Instrumental Section. This section to be filled out only by instrumentalists.
Write the notes for the chromatic scale for your instrument, beginning on the note concert Bb and ending on the given note.

A. Flute, oboe, and mallet percussion (bells)

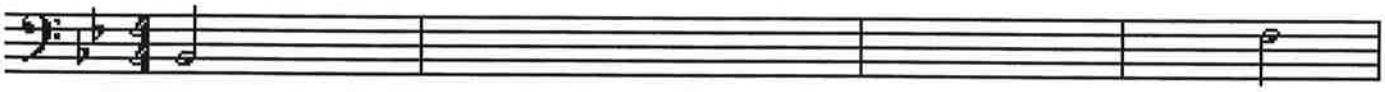
B. Clarinet, trumpet, tenor saxophone, baritone TC, bass clarinet



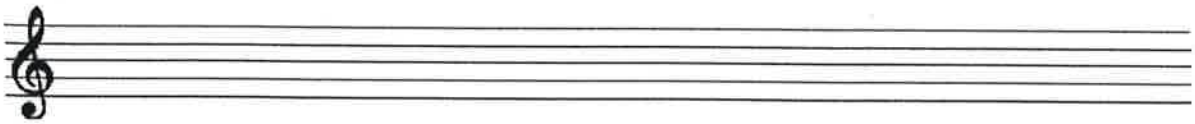
C. Alto and baritone saxophone

D. French horn

E. Trombone, baritone BC, and tuba



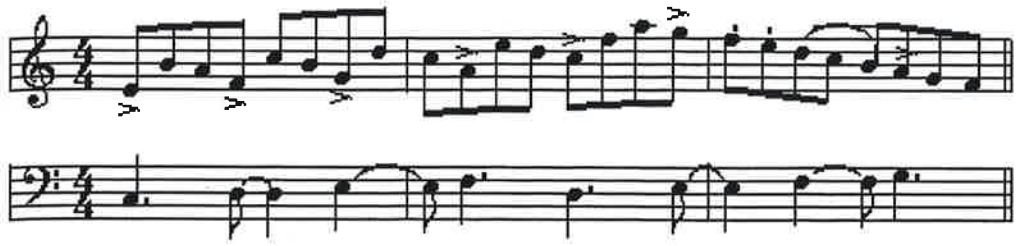
VIII. Vocal Section. This section to be filled out only by vocalists.
Starting on C, write a chromatic scale in half notes. Write the vocal solfege under each note.



Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises-Pretest

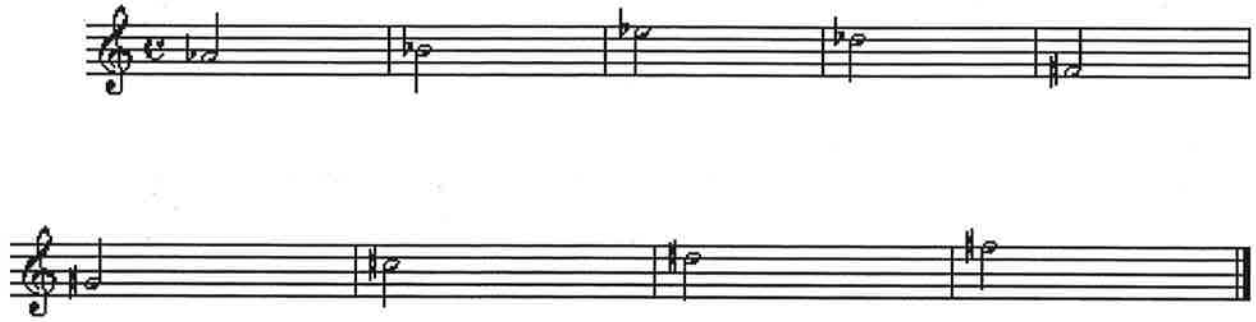
IX. Articulation Section

Write the letter(s) under each music note that is affected by the articulation symbols.
S=slur A=accent ST=staccato T=tie



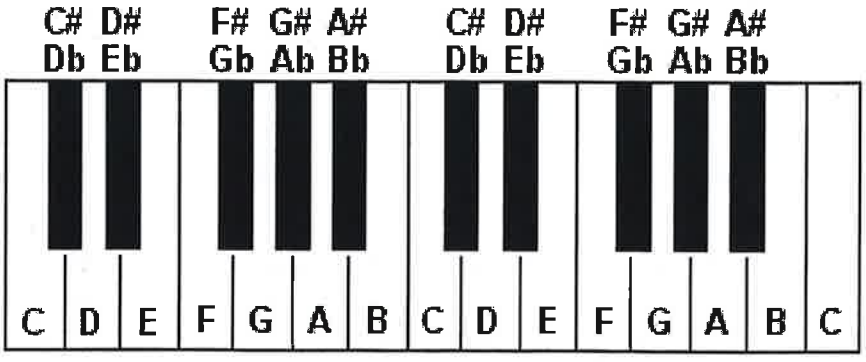
X. Enharmonic Section

Write the "other" name of the notes given beside each note. Use the resource below if needed.



Resource

Use the picture below to help answer questions on this test.



Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises Post-Test

I. Matching-Identify the Music Symbol

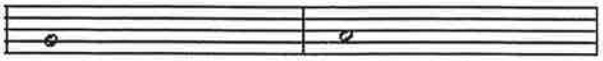
1. _____ quarter notes
2. _____ staff
3. _____ half notes
4. _____ whole notes
5. _____ quarter rest
6. _____ whole rest
7. _____ treble clef sign
8. _____ bass clef sign
9. _____ half rest

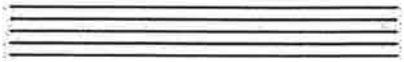
A. 

B. 

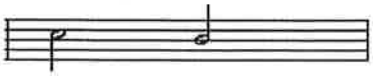
C. 

D. 

E. 

F. 

G. 

H 

J. 

II. Multiple Choice (circle the best answer)

10. $\frac{4}{4}$, $\frac{2}{4}$, $\frac{6}{8}$ a) treble clef signs b) 4 beat rest c) bass clef sign d) time signatures e) none of these

11.  a) end bar b) repeat sign c) measure d) the music staff e) none of these

12.  a) end bar b) repeat sign c) measure d) the music staff e) none of these

13.  a) whole notes b) quarter notes c) sixteenth notes d) eighth notes e) staccato notes

14.  a) eighth notes b) quarter notes c) slurred notes d) whole notes e) tied notes

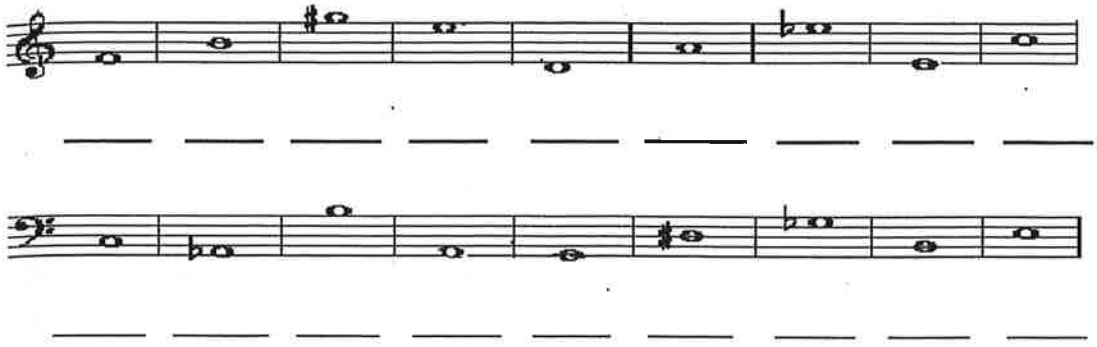
15. C a) common time b) cut time c) alla breve d) $\frac{2}{4}$ time e) none of these

16.  a) eighth note b) staccato note c) sixteenth note d) dotted quarter note e) none of these

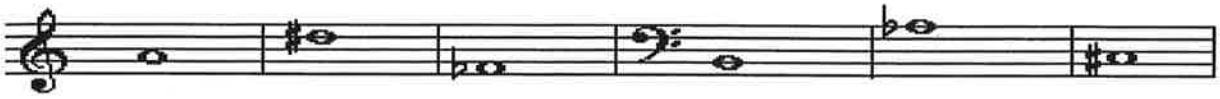
17.  a) slurred note b) dotted quarter note c) staccato note d) eighth note e) none of these

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises-Post-Test

III. Write the letter name under each note including its sharp or flat when necessary.

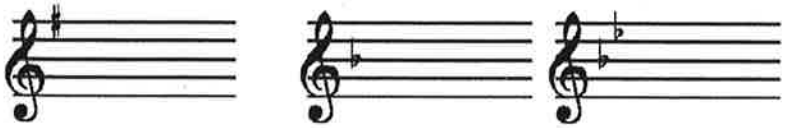


IV. Draw a note beside the written note ½ step **higher** than the written one.



V. Starting on the note C, write a major scale in whole notes. Add the key signature if needed.

VI. Write the letter name of the scale and the key to which it belongs in the blank.



1. _____ 2. _____ 3. _____

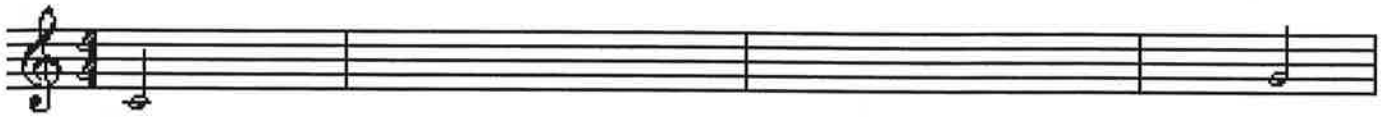
4. _____ 5. _____

Designing and Implementing a Program to Enhance Music Theory Achievement Through Integrated Learning Exercises-Post-Test

VII. Instrumental Section. This section to be filled out only by instrumentalists.
Write the notes for the chromatic scale for your instrument, beginning on the note concert Bb and ending on the given note.

F. Flute, oboe, and mallet percussion (bells)

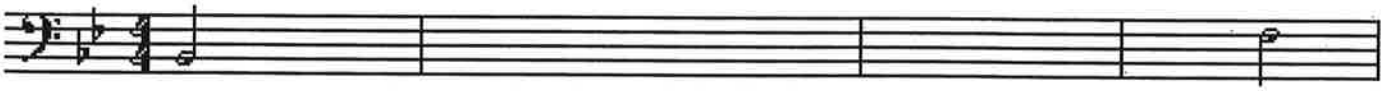
G. Clarinet, trumpet, tenor saxophone, baritone TC, bass clarinet



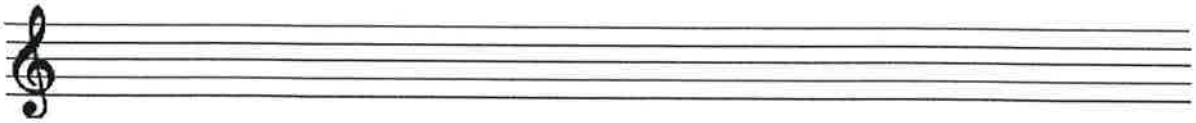
H. Alto and baritone saxophone

I. French horn

J. Trombone, baritone BC, and tuba



VIII. Vocal Section. This section to be filled out only by vocalists.
Starting on C, write a chromatic scale in half notes. Write the vocal solfege under each note.



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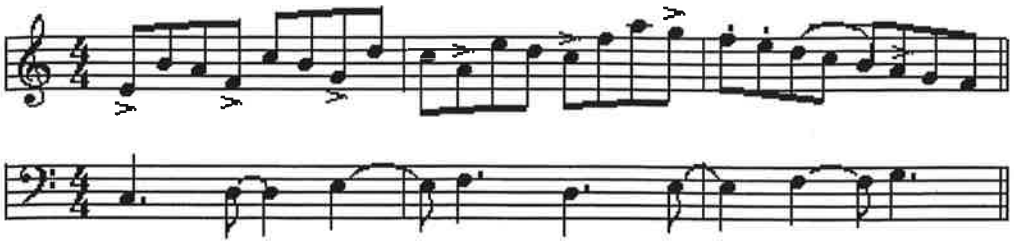
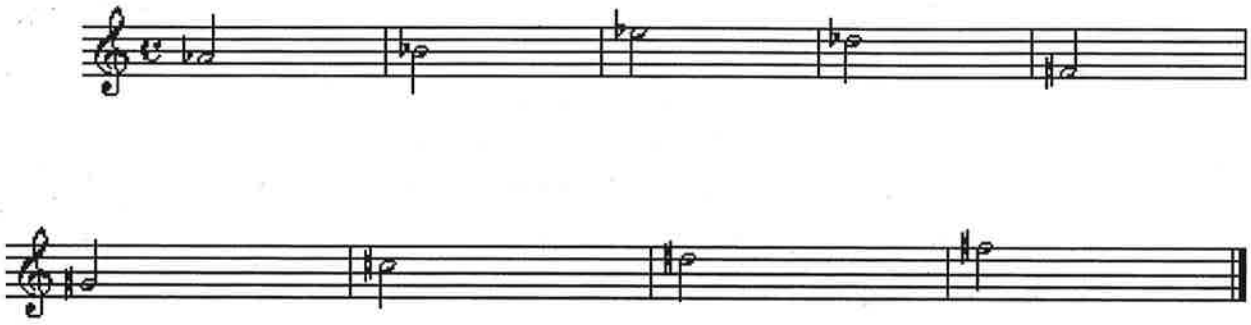
IX. Articulation Section

Write the letter(s) under each music note that is affected by the articulation symbols.
S=slur A=accent ST=staccato T=tie



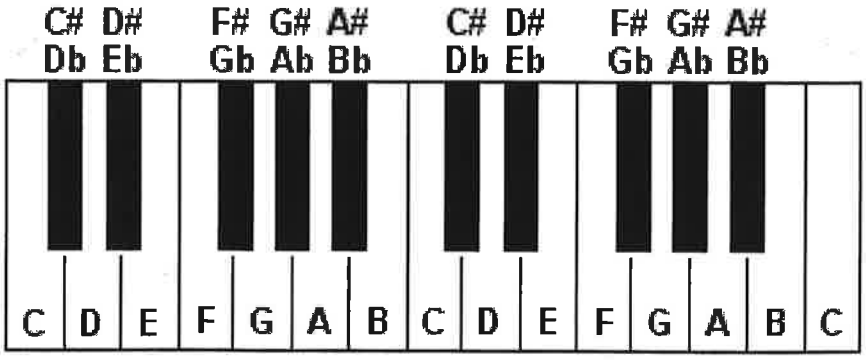
X. Enharmonic Section

Write the "other" name of the notes given beside each note. Use the resource below if needed.



Resource

Use the picture below to help answer questions on this test.



Appendix C

Summary of Pre- and Post-Test Raw Score Results

Summary of Pre- and Post-Test Raw Score Results

School	Grade/Experience Level	Number of Participants	Avg. Raw Score Class Improvement	School Overall Raw Score Improvement
Chadbourn Middle School	3rd Year Students	33	18.32	**17.31**
	2nd Year Students	18	18.41	
	1st Year Students	10	15.2	
		Total-61		
Tabor City Middle School	8th Grade Students	23	13.17	**17.5**
	7th Grade Students	19	21.84	
		Total-42		
Elizabethtown Middle School	8th Grade Students	16	5.91	**7.905**
	7th Grade Students	12	9.9	
		Total-28		
Pembroke Middle School	3rd Year Students	35	19.2	**13.76**
	2nd Year Students	40	15.9	
	1st Year Students	18	6.18	
		Total-93		
South View Middle School	8th Grade Students	36	20.88	**22.39**
	8th Grade Late Starting Group	31	24.25	
	7th Grade Students-3rd Period	30	24.4	
	7th Grade Students-4th Period	27	20.03	
		Total-124		
		Total Number of Participants **348**		Average Raw Score Improvement of All Schools **16.685**

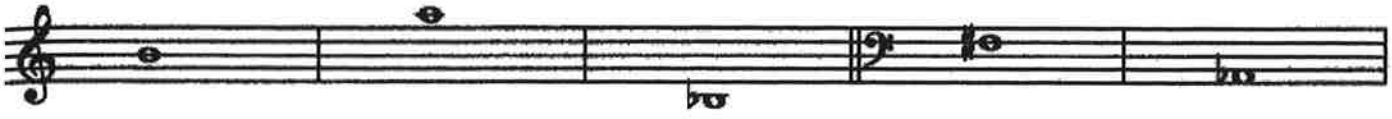
Appendix D

Fundamentals of Music Sample Test A

Fundamentals of Music Sample Test A

UNC Pembroke
Dr. Beth Maisonpierre

1. On the space below each pitch, provide its name (for example, A, B-flat, etc.)

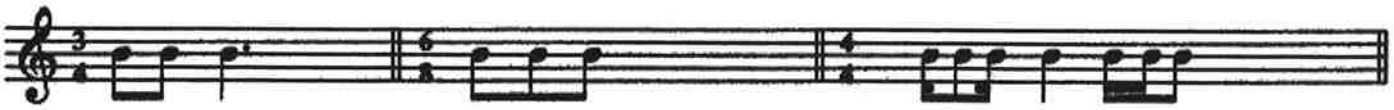


_____ _____ _____ _____ _____

2. Indicate what note value is equal to the given rest:

3. Fill in the blanks with a number:

4. Add *one* note to complete the following measures:



5. Indicate whether the distance between the two pitches is a half step (H) or whole step (W).

_____ _____ _____ _____

6. On the staff, next to the given note, write its enharmonic equivalent (another way to write the same pitch).

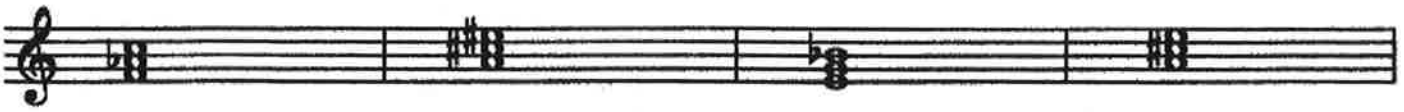
7. Identify the following major key signatures:

_____ _____ _____ _____

8. Identify the following scales with letter name and quality (major or minor). If the scale is minor, indicate the type of minor (natural, harmonic, or melodic).

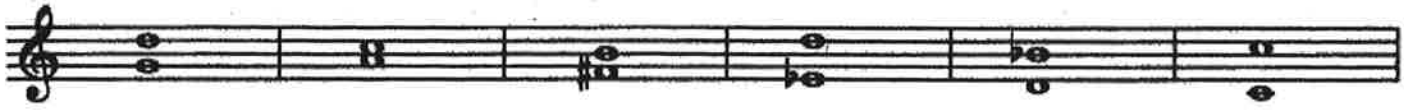
_____ _____ _____

9. Identify the following triads with letter and quality (major, minor, diminished, or augmented).



_____ _____ _____ _____

10. Identify the following intervals with quality and number (example: major 3, minor 6, perfect 5, etc.)



_____ _____ _____ _____ _____ _____

Appendix E

The Sequential Theory Training Manual

Teacher's Edition

The Teacher | **Music Theory Terms** | **Note Names** | **Chromatic Scale, Whole and Half Steps, Enharmonic Notes** | **Major Scale Construction, Key Signatures, Blues Scale**

The Sequential Theory Training Manual

by David Barkley

Prepared as part of the project

Designing and Implementing a Program

to Enhance Music Theory Achievement

Through Integrated Learning Exercises

UNCP Spring 2005

Teacher's Manual

Contents of *STT* Training Manual

A. Instructions to Teachers for Implementation

B. Classroom Activities

C. STT Training Manual for Students

D. Pre-test/Post-Test

Timeline Overview

Day One: Pre-test and Note Names

Days Two-Four: Note Names, Music Theory Symbols and Note Values

Days Five-Nine: Chromatic Scale, Whole and Half Steps, Enharmonic Notes

Days Ten-Twelve: Major Scale Construction and Key Signatures

Days Thirteen- Fourteen: Blues Scale

Day Fifteen: Post-test

The Train Analogy

The teacher is the engineer that drives the train.

The music in the repertoire is the fuel.

The notes and terms are the train tracks that determine the direction the train will take.

The contents of the different cars behind the engine are the scales, key signatures, enharmonic tones, and whole and half steps.

The destination is wherever your imagination will take you.

****Special Notes to Participating Directors****

1. In the production of the *STT* student manual, the risograph copier cut off most of the page numbers at the top of each page. I would highly recommend you have your students go through and number each page sequentially. This will assist your teaching each day as you will be able to have your students open their *STT* manual directly to a given page.

2. Also, I am including a copy of the *STT* student manual with your teacher's manual. I recommend you go through and number each page of your copy of the student manual so as to assist in the above.

3. Please contact me if you have any questions about the project.

David Barkley

Tabor City Middle School

Chadbourn Middle School

701 W. Sixth Street

Tabor City, NC 28463

dcbarkley@earthlink.net

910-653-3637 TCMS

910-654-4300 CMS

910-653-5080 Home

Instructions to the Teachers for Implementation

1. General Instructions

The *STT* Program is designed to enhance the learning of music theory for the students in your classrooms. Teachers are to implement the applied activities within the selected repertoire for each group. After careful study, please make any decisions for adapting the activities for your individual classrooms that you feel need to be done. Please make a note of any accommodations that you do so I can make proper documentation.

The program consists of 4 parts:

- a pre-test,
- instructions for the teachers,
- a student manual that combines information with written activities,
- and a post-test.

Please do not review any information before the pre-test, just give it on the first day of the program. Simply ask the students to do their best. Students are not to know how they did or what their scores were before the post-test at the end of the program. You may grade their tests if you would like to know the results, but please do not share this information with your students until the end of the program. If you do not wish to grade their tests, that is fine. I will pick them up, grade them, and will send the results through e-mail. The intended duration of the program is 3 weeks.

I am including vocal solfege symbols as an activity for the participating group from the vocal discipline. This exercise is optional for the instrumental groups, however if you

feel it will be beneficial to your groups, consider using it. Again the goal here is to help your groups to understand the music theory concepts more.

2. Pacing

The speed at which each group masters the concepts will be different. The only time guideline is the 2-3 week timeline for the total project. The *STT* activities are designed to reinforce the skills of your ensembles. Regular ensemble performance is not only to continue each day, but is the key part of the plan.

As music terms and concepts occur in your selected repertoire, please point out their use. This will benefit your students as they begin to realize why we are studying these terms. Demonstrations of scales and other musical concepts will enhance student understanding and are encouraged.

3. Sequence

The sequence of activities in the *STT* follows an order that builds one concept upon another. Please follow the order outlined. Even if a class masters a concept, please finish the activity anyway. Most classes have high and low achieving students and have those who will benefit from the complete activities.

4. Scope

I selected 18 common music symbols and several concepts to address based upon the surveys taken at the music conference, an analysis of seven band method books, and the information supplied by the participating directors. Although note names and note values could take weeks for students to understand and master, recognition and identification of the symbols used are the goals during the note naming activities. A common and

consistent glossary of terms must first be established. This will aid in the development of the more difficult concepts that are introduced in subsequent lessons.

5. Teaching Style

The *STT* is designed to be a tool for you to use. You may have to adjust it to fit your personal teaching style. The goal is to enhance the learning of your students. The students will not learn as well with an activity that they feel is not natural to you. Please look through all of the activities and the *STT* manual prior to use. If anything is not clear, please let me know.

6. Main Focus

The main focus of the activities of the *STT* program is to develop the understanding of scales and their relationship to music. Whole steps, half steps, enharmonics and chromatic scale movement will be a part of this focus. As music is based on scales and steps, the development of these concepts should be a large benefit to your students.

7. The North Carolina Standard Course of Study

The *STT* program will address the following standards in the North Carolina Standard Course of Study for middle school students:

- 1.1 The student will (TSW) demonstrate understandings, sensitivities and skills in singing.
- 1.2 TSW demonstrate appropriate vocal practices-sing accurately (notes, rhythm, etc.).
- 1.3 TSW show appreciation for the efforts of others.
- 2.1 TSW demonstrate understandings, sensitivities, and skills in playing instruments.
- 2.2 TSW demonstrate understandings, sensitivities, and skills through appropriate instrumental practices (technique).
- 2.3 TSW show appreciation for the efforts of others.
- 5.1 TSW demonstrate related understanding, sensitivities, and skills in reading and notating music (reading and writing scales).

- 6.3 TSW analyze the uses of elements of music in aural examples representing diverse genres and cultures (dynamics).
- 6.4 TSW demonstrate knowledge of the basic principles of music construction in the analysis of music (key signatures, intervals).
- 7.1 TSW devise and apply criteria for evaluating compositions and performances (verbalizes similarities and differences in relation to the performance and the score).
- 8.2 TSW Identify ways in which the principles and subject matter of other disciplines taught in the school are interrelated with those in music (musical math).

Classroom Activities

Pre-test and Note Names

Day One

- The pre-test is to be given without any review on the first day of the program.
- Students are not to work in groups, share answers, or communicate in any way. The goal is to evaluate their understanding of the skills and concepts prior to working with the *STT*.
- Take up the tests at the end and do not review correct or incorrect answers at this time.
- Next, have a student(s) read aloud the material from the *STT* student manual titled Note Names and the Music Staff. At the end of page 3, there is an activity section.
- Have the students write in the names of the notes under each of the staves that are given.
- Circulate, look at their work, and determine their level of mastery. You may give students reminders such as, "identify the bottom line of the staff, go through the alphabet, only seven letters to name notes," and so on.

When all have finished, announce that you will continue the activity tomorrow and work with your ensembles on selected pieces from their repertoire. Call on students to identify note names from selected parts in the piece. Focus on places that are easy to find so as not to take too much time just locating the notes. Suggestions: use the first 6 notes, the last 6 notes, section A first note, B first note, measure 21 first note, 29, etc. If students are able to do this successfully, proceed to accidental or frequently missed notes. Then have students name the notes, identify the correct fingerings, and play or sing the pitches. Rehearse the piece all the way through afterwards as closure.

Day Two.

Begin by having students get out their *STT* manual and grade their work from Day One. Have them check their own work or exchange papers, then call out the correct answers. Take a show of hands (evaluation) of how many missed 8, 7, etc. After a review of how to determine the note names of each music staff, students will play "*Mad Minute*," a game where they have to identify as many notes as they can in one minute from the worksheet. The students will write the letter names under each note as they did on the note naming activity exercise from the *STT* manual. Have them exchange papers for grading. Since this is not a test grade, grades do not have to be kept confidential. Go over the correct answers. Make a list on the board of the top ten or top five from each class. Leave this list up for a couple of days. You may want to continue this quick activity after the program is over. After the list is made, any rewards to be given are up to you.

II. Note Values, Rests, and Time Signatures

Next have selected students read aloud the Note Values, Rests, and Time Signatures section of the *STT*. Students are to complete the musical math activity at the bottom of the

page. Give students the correct answers and have them grade their own papers to check their work.

When you move to ensemble time, select 2 pieces that are different from day one and repeat the note naming exercise. Remember to progress from the easy to find to those more frequently missed. Also select note values, rests and the time signatures for oral review. Remember to rehearse the 2 selections after completing the theory exercises.

III. Music Theory Terms and Symbols

Day Three

- Select students to read the Dynamics and Symbols pages out loud from the *STT* manual.
- Have students fill in the answers to the questions as they go down the page.
- After they finish the activity section, review the answers aloud and have them grade their own papers and correct any mistakes they made.

Have students get out the first ensemble piece you have planned for the day and select one student to be "it." You will also select an object (a star?) that is not too large. The selected student will step outside of the door while the class hides the object (star?). When the student is called to return, have the class begin to sing or play a selected song. When the student gets closer to the object, the class will crescendo. When he or she moves away from the hidden object, the classes will decrescendo. The teacher will conduct or play the piano and signal a fermata when the student is standing near where the object is hidden. The student will select the next student and the teacher will select the next song. Repeat the activity several times. Next, have selected students read the pages Dots and Articulations aloud. The teacher will review the uses of dots in music on the board and give vocal

examples of staccato, slur, and accents. Then the teacher will select from the groups' repertoire some pieces with examples of each articulation. Students will find and identify the use of dots and articulations from the selected pieces. The pieces or selected parts will be played or sung through as closure, incorporating the use of each articulation.

Day Four

After a brief review of the terms from day 3, the teacher moves straight into today's activity. Using the basic concept from an old television show, "Concentration," the teacher will hang the poster board or chart up with the 5x8 cards of music symbols, but they are all face down so only the numbers on the back of each page can be seen. The teacher will go down their roll and call on students to name pairs of numbers. The teacher (or a helper) will turn the two cards over. The teacher will then identify each of the symbols by name to the class. If the cards match, the cards stay face up and the student who names the symbol gets to guess again. If the cards do not match, the cards are turned face down again and the teacher selects the next student. The teacher will use 9 symbols at a time as there are not enough pockets on the hanging chart to get in two cards of each symbol. The teacher will play two rounds to get all the symbols in. When all of the symbols have been identified, students are to complete the Matching Music Symbols activity sheet in the *STT*. The day will conclude with 2 pieces selected by the teacher and the teacher will point out places where the symbols are used. The teacher will ask the students what the names of the symbols are before performing each one.

IV. The Chromatic Scale

Day Five

Begin with a demonstration of the chromatic scale. This could be on the piano, or another instrument, but do it as quickly as possible. Your students will probably ask what was that? Tell them it was the chromatic scale and that is what we are going to be studying for a few days. Have them get out their *STT* manuals and read the first page of Understanding the Chromatic Scale silently. Then, explain to them what they read and how the bottom picture is the piano keyboard we use today only with the notes written on them. The second and third pages show how to identify the natural keys on the piano.

- Go through each picture and describe how to find each note on the piano. If one is not available, use as large a picture diagram as you can find.
- Select students to come up and identify the note you call out by playing the keyboard or putting their finger on the note you select. Try to mix up your selection of students between high and low achieving students, not just selecting those who you believe will give all correct answers.

Next, cover the sharps, flats and natural section of Understanding the Chromatic Scale (the next pages in the *STT* manual). Have a student or students read the section aloud, then repeat the note naming activity several times on the piano keyboard incorporating the use of the white and black keys. Proceed to your selected ensemble pieces for the day. Explain to your students that music being based on scales, the chromatic scale is the scale that includes every single note. When music is made, we just leave a lot of the notes of the scale out. If you have several students who can already play or sing a chromatic scale, have them demonstrate before your ensemble rehearsal begins. Review your literature ahead of time

and screen for any sections that move chromatically. If you have any, point out these to the students prior to rehearsing that section of the piece.

Day Six

Begin by reviewing selected points about the chromatic scale from day 5. I suggest:

- moves from right to left (up) or left to right (down) and leaves out no keys on the keyboard
- moves in half steps
- includes sharps, flats, and naturals
- sharps raise the natural note by half a step
- flats lower the natural note by half a step
- what sharps, flats, and natural signs look like

Have a student(s) read the section enharmonic notes from the *STT* manual out loud. Review the main points about enharmonic notes and write them on the board. Have students complete the activity on enharmonic notes from the *STT*. Review the correct answers aloud and have students correct any wrong answers.

While the students have their manuals out, segue into the half step/whole step section of the *STT* (pages 5-6). The teacher reads each of these sections aloud and adds any examples to the presentation they feel will assist the understanding of the students. Students are to complete the written activities at the end of the section, giving examples of half steps and whole steps from the keyboard. Call students one at a time to the piano or to the large keyboard picture you have. Select different notes and have them identify sharp, flat, or natural. Then if you have selected a sharp, ask the student to give the enharmonic flat name. If the student can give the flat name, ask them the enharmonic sharp name. After several

examples, move into the ensemble piece you have selected for the day. Identify places where the movement occurs in whole and half steps that are easy to locate in the music. Select students to play or sing the two-note movement (half step or whole step). Ask each student whether it was a whole or half step movement they heard. Close by rehearsing the identified sections straight through with the entire ensemble.

Extension: Select different notes and either have the student play the note on their instrument or play it on the piano. After the note, ask the student to sing (even instrumental students) what they think a whole step higher will be. Have the student play the note to check their response. Then repeat the activity with half steps. Lastly, repeat the activity with the entire group attempting to sing a whole step higher, then a half step higher. Conclude by rehearsing the selected ensemble piece all the way through.

Day Seven

Begin by reviewing the main points about enharmonic notes, sharps, flats, and naturals on the board. Segue straight into the singing exercise from day 6. After a few examples, have students attempt to try to sing a whole step lower than the pitch you assign using the vocal syllable of your choice. I suggest the syllable la. You will probably get mixed results. Encourage the students to slide down a half step first, then a half step more to find the whole step. If the students catch on quickly, extend this activity to cover the intervals down or up a third or a fourth. If this is very easy for them, go for a fifth. This will develop their ears and encourage them to listen. It will also help them with their sight-singing. When you feel that the students are able to do this, have them get out their *STT* manuals and turn to the next to the last page of the section Understanding the Chromatic Scale. Review the section on going

up and down the chromatic scale. Make sure you point out that going up we use sharps, and going down we use flats.

Write a one octave chromatic scale on the board (ascending) and then take the sharp notes and ask students to give the enharmonic flat names for each one. Then repeat the activity using the descending scale and have them give the flat names. Have students play or sing the scale as a group activity using the syllable of your choice. Have students write the letters names to an ascending and descending on the back of their *STT* manual.

Vocal extension: Use the vocal solfege page from the *STT* manual and review the hand motions for each syllable. Have students sing the pitch as they do the hand motions. Rehearse this several times to develop proficiency.

Instrumental extension: Review the notes of the chromatic scale for each instrument and either model or have a student model the correct fingering. Extend the range lower and higher than the scale than one octave with more advanced students. For younger students complete the chromatic from concert Bb to concert F. Give the students this challenge: Can you play all the way up and all the way back down in one minute or less?

Application: Locate parts in the repertoire that have short chromatic sections (it may only be 3 notes). Have the students play that section individually and point out the chromatic movement. If there are no chromatic sections in the ensemble pieces, have the students play the chromatic from (Bb to F concert) individually and give any help that is needed. Then proceed with rehearsal of the ensemble piece on other areas you know need attention, pointing out music symbols and reviewing their names.

Days Eight and Nine

These days will be review and catch up days. Complete any remaining pages in the STT

manual on the chromatic scale that you may not have completed due to time. Also, review the section on identifying enharmonic notes and what is a half step and whole step. Include a few examples from each of sections both days. Review days will serve to reinforce the material and give more students a chance to participate. Try to select students who did not give answers or do the activities in the first round. Incorporate ensemble pieces each day into your activities.

V. Key Signatures and Major Scales

Day Ten

Today we begin the section of the STT manual titled Key Signatures and Major Scales. Begin by reading a sentence aloud, then selected students reading the next sentence aloud. Pause and discuss each picture if you feel it is needed. Stop at the end of the first page and draw a diagram on the board of a music staff, clef sign, and time signature. Draw a large circle in the area where the students will find the time signature, preferably with a different colored marker or chalk. Explain to the students that the examples are using sharp signs but key signatures can also use flats. Point out that they will never see sharps and flats in the key signature at the same time, it will be none, sharps, or flats, but not both.

Now read page two with the selected student reading a sentence aloud, then the teacher reading the next sentence. After finishing page two, work through the examples from the *STT* manual on the board and explain the concept. Use different colored markers or chalk if possible for the sharps and flats (visual learner).

Proceed to the first written activity on page 3 of the *STT* manual of Key signatures and Major Scales. Have students complete the top section but do not move on to the remaining

section (under the keyboard). Select several ensemble pieces and call on students to name the key signatures of each piece, and places where it changes during the piece. Extend the lesson by writing other keys on the board and selecting students to identify each one. If your students enjoy games, you could have tournaments where one student gives the key signature name and two other students race to see who can correctly write the key signature on a staff (on the board). For more advanced students, have them play or sing the first five notes from scales of selected key signatures. Conclude with rehearsal of ensemble literature you have selected for the day.

Day Eleven

Begin today with a brief review of how to find the name of key signatures of major scales (from day ten) C, F, Bb, G, and D. Try giving the letter name of the key and see if some students can think backwards and figure out the sharps and flats.

Then have the students turn to page three in their *STT* manual. Begin with the section below the piano keyboard and have a student read the 6 sentences out loud. Then you read the sentences out loud. Have the students put their fingers on the keys E and F, and B and C. Make sure they see that between these two sets of keys there are no black keys in between. Tell the students again that those are already half steps without the black keys in between. Review the next section with the tips to remember the formulas for major scales. Then move to the activity in the *STT* manual below the section. Remind the students that in the key of C major there are no sharps and no flats. Also remind the students of the fact that a major scale is a series of eight notes. Finally, remind the students of the pattern to build a major scale. At this point, the teacher will bring out the "Scale Slider." The teacher will show that the background is the chromatic scale. The slider part is made using the scale formula of WWHWWWH. The teeth in the slider

simply allow the notes you play to fit in between the teeth. Have a student move the slider and play or sing the notes that fall into the gaps to demonstrate.

Extension idea: As a class project, see if the students can make their own scale slider using construction paper and scissors. I suggest integrating the use of math measurements to determine how big the spaces between the "teeth" should be. Have them slide up and down the background and test their formula. Students could play or sing the note notes, listen, and determine if their slider works. This could even be done after the STT project is concluded.

Without giving them any more clues (including using the slider), determine if the students can write the letter names of the notes to the C major scale. When the students have spelled out the C major scale using letter names, have them draw the scale on a music staff (treble or bass clefs, or both). If they are unsuccessful, go back and review. When you are satisfied that they understand the C major scale, have them try the D major and the F major scales from the manual. Give help as needed.

Conclude by reviewing the scales completely with each instrument section or vocal section playing or singing the syllable of choice. Have the students search a piece from the repertoire for sections that move in scale like patterns. When they find them, have them play or sing the section. Then have all the students that are involved with that pattern play or sing the section. Tell the students that music is based on scales and steps. The better they are at scales, the easier the music will be for them to play or sing. Finish by rehearsing pieces from your repertoire and point out scale movement that occurs.

Day Twelve

Begin today by reviewing how to find the key signature of a major scale. Cover the count down four method (flats) and the step above method (sharps). Next review the formula for

major scales (WWHWWWH). Have a contest to see who can write the notes of selected major scales the fastest. Use the board and compete in groups of two. In round two, have the students write the names of two major scales the fastest. Use the scales C, F, Bb, G and D major. If this goes well, move to the chromatic scales (one octave) with the two champions from the class.

Another review game is next with who can write the sharps and flats in the correct order on a music staff the fastest. Review the order for the sharps and flats from the *STT* manual, then play away. Consider a reward for the grand champion of the day. Finally, hand several students pieces that the class has not covered, tell them to name the key signature of the piece and write the major scale that goes with it on the board. Sight read the pieces if time permits and have students look for scale movement of notes.

Day Thirteen

Today it's time to get bluesey with it. Begin with a brief example of a blues song recording if you have one available, or a brief discussion of what comes to mind when the students hear the words "the blues." Have your students turn to the blues scale section of their *STT* manual. Play or sing the C blues scale for your students. Have selected students read the first 5 sentences of the *STT* section out loud, then play or sing the C blues scale for the students again. The teacher will read the next part out loud and use the board to add to the information if needed. Ask the questions and have the students compare and contrast the differences and similarities between the two scales. Next have a selected student read the section out loud on octaves.

Use the board again and review/write the steps listed in the *STT* manual on how to change a major scale into the blues scale. Then have students complete the 3 activities on the blues scale in their manual. Select one of the scales and as for volunteers to play or sing the scale in half notes. Move to other scales if this goes well.

If you have a blues style piece in your school repertoire, pass it out to the students and give it a run through. The students may like it so much they will want to include it in their spring concert! Save some time to develop your repertoire and note any blues style chord progressions or blues style intervals that may occur. Ask students to bring examples of blues music or blues articles in tomorrow as homework.

Day 14

Begin by reviewing the blues scale and how to take a major scale and make it the blues scale. Select a couple of examples and review the needed steps again on the board. If any students brought in examples of blues music or found any websites, share these with the class. The teacher will play or assign background chords (I-IV-V-I) and have volunteer students try to improvise using blues scale notes. This will have mixed results. You may find someone who is very good! The important thing is to allow them to make up their own pattern, use the blues notes, and have fun with it! If no one volunteers, the teacher will play the scale and improvise to give an example if possible. If no students still will not try, conclude with an example of blues music you have selected. Develop your repertoire with any remaining time.

Day 15

Conclude the project by giving the *STT* post-test. You may review as you feel is needed prior to administering the test. Students are not to use their *STT* manual to look up answers to

the test. Allow no sharing of answers, inform the students they are to try their best, and collect all papers after the test is finished. I recommend that students who finish early turn their papers over and draw on the back or read an AR book silently until all have finished.

Post Project

After the project, please complete the teacher evaluation form and hold the post-tests for pick up by me. If you desire, you may grade the tests yourself or simply hold them. I will inform you of the results by email or snail mail. I hope you have found this program to be beneficial to your students. Your honest critique of the activities and or the responsiveness of your students is welcome. Please feel free to contact me if you have questions.

Answers for Mad Minute Quiz (day 2)

Staff One
D-C-A-F-E-A-B-F-G-G-E-D-G-F-D

Staff Two
F-D-G-B-C-G-F-E-B-A-C-D-E-D-E

Staff Three
A-Bb-E-F-G-A-Bb-F-D-E-Bb-F-C-E-G

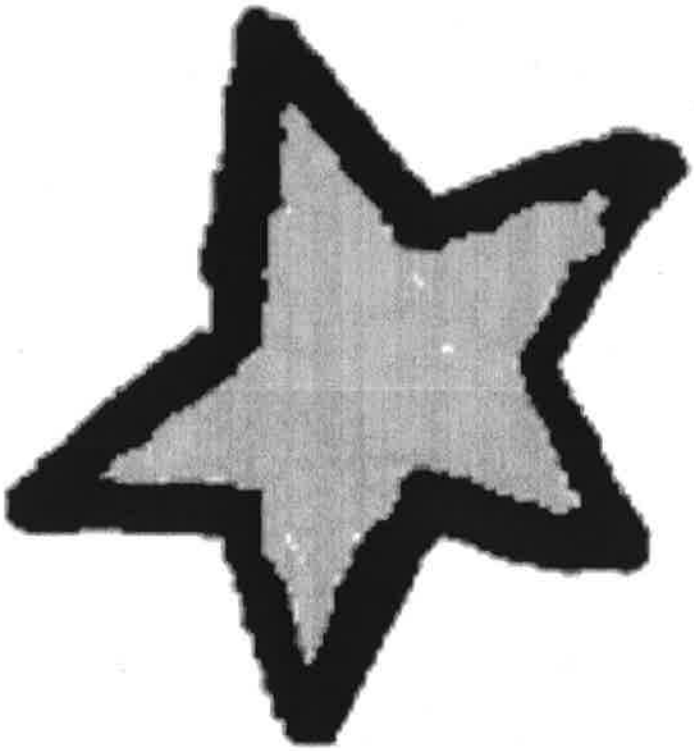
Staff Four
D-G-E-A-G-G-G-C-A-D-G-E-F-F-G

Staff Five
A-D-A-Bb-E-G-D-D-Bb-Bb-C-F-D-G-D

Staff Six
Eb-F-G-A-Bb-G-F-Eb-C-A-G-D-Eb-F-D

Staff Seven
A-F-G-A-Eb-Eb-D-Bb-D-Eb

Star for use during the crescendo activity (day 3)



Appendix F

The Sequential Theory Training Student Manual

School Name_____ Director's Name_____

The Teacher | **Music Theory Terms** | **Note Names** | **Chromatic Scale, Whole and Half Steps, Enharmonic Notes** | **Major Scale Construction, Key Signatures, Blues Scale**

The Sequential Theory Training Manual

by David Barkley

Prepared as part of the project

Designing and Implementing a Program

to Enhance Music Theory Achievement

Through Integrated Learning Exercises

UNCP Spring 2005

Student Manual

Student's Name_____

Note Names and the Music Staff

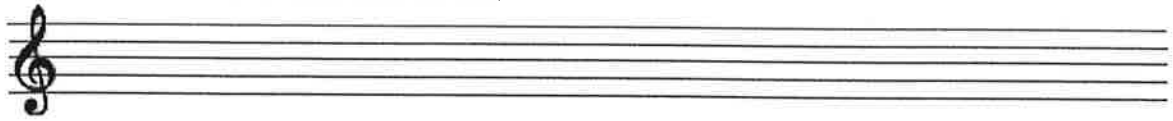
We only use the first seven letters of the alphabet to name notes. How many letters? ___

Let's name them. **A-B-C-D-E-F-G.** After you get to G, the next letter is A again.

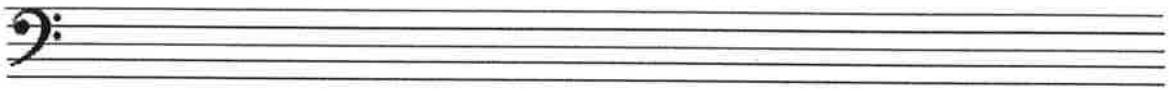
We won't use H, I, J, and the rest of the alphabet to name notes.

Music is written on 5 lines. We call the places in between the lines, spaces. There are 4 spaces. Here is a music staff with a treble clef sign on it.

The treble clef is also called the G clef.



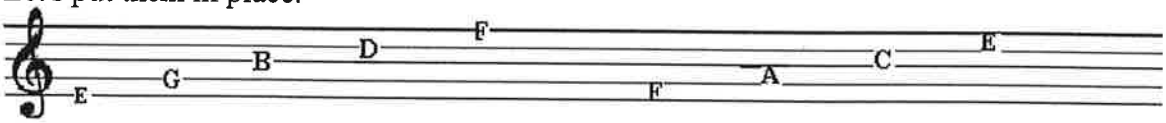
Here is a music staff with a bass clef sign. The bass clef is also called the F clef.



Let's get back to the note names. When putting the note names on the staff, always remember which staff you are using. The hardest part about learning note names is remembering the bottom line of each staff! Once you have that, just go up the alphabet to G, and the other notes will fall into place. The bottom line of the treble or G clef is **E**. The bottom line of the bass or F clef is **G**. Do you know what an acronym is? It is a word or phrase formed from the initial letters of a name, word or phrase. You can use an acronym to help yourself remember the lines. Here is one acronym for the lines: **E**very **G**ood **B**oy **D**eserves **F**udge. Start from the bottom and go to the top. Take the first letter from each word and shaboom! You have named the lines.

The spaces spell the word face. **F-A-C-E**.

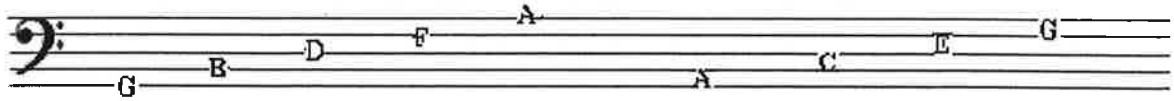
Let's put them in place.



Note Names and the Music Staff

When using acronyms to name notes, always look at the **ROUND** part of the note. If the round part has a line going through it, use the line clues. If the round part is in between two lines, use the space clue.

Here are the note names of the bass clef.



One acronym for the bass clef lines is **G**ood **B**oys **D**eserve **F**udge **A**lways.

Good girls deserve fudge too. This just doesn't fit our music staff.

One acronym for the bass clef spaces is **A**ll **C**ows **E**at **G**rass.

Or maybe it is **A**ll **C**ars **E**at **G**as. Any phrase you can think of will work, as long as the letters match the lines and spaces.

Activity

Now you try to think up an acronym of your own to match one of the clef signs.

Remember go from the bottom line to the top!

E_____ G_____ B_____ D_____ F_____

F_____ A_____ C_____ E_____

G_____ B_____ D_____ F_____ A_____

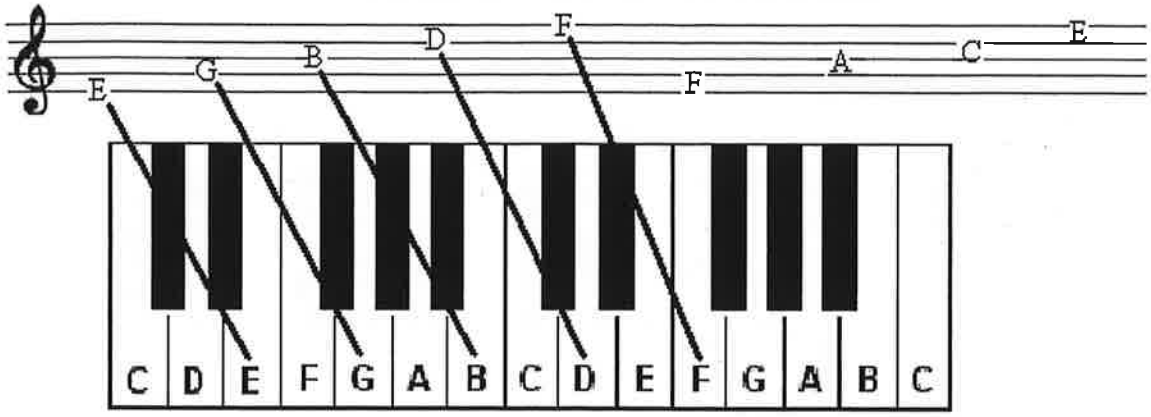
A_____ C_____ E_____ G_____

Don't get confused by the **shape** of the note. This tells you **how long** to play or sing the note. The **round part** is what tells you **which one** to play. Sometimes the stems of the note will go up, sometimes they will go down. This doesn't change the note name.

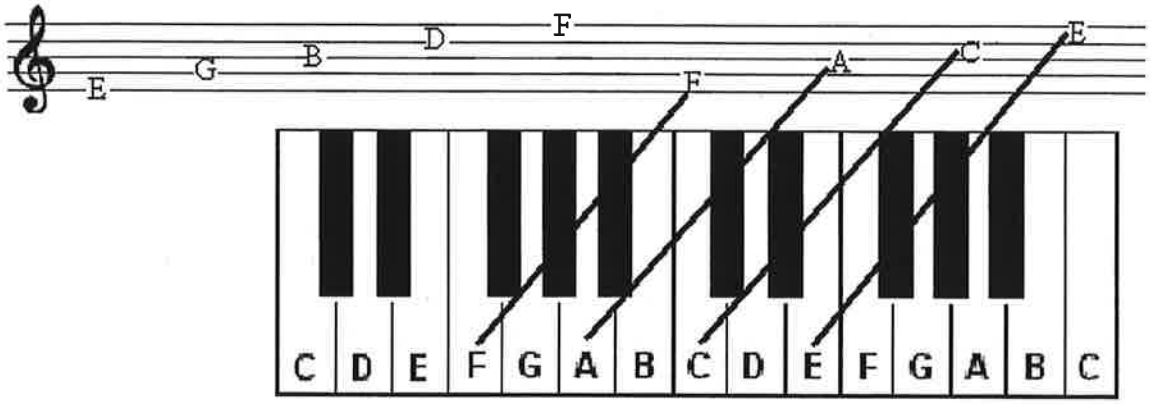
Review/Focus

Notice there are more than one of each letter? Remember we only use the first 7 letters of the alphabet to name notes. The lines below show you where the notes are on the keyboard.

Note Names and the Music Staff

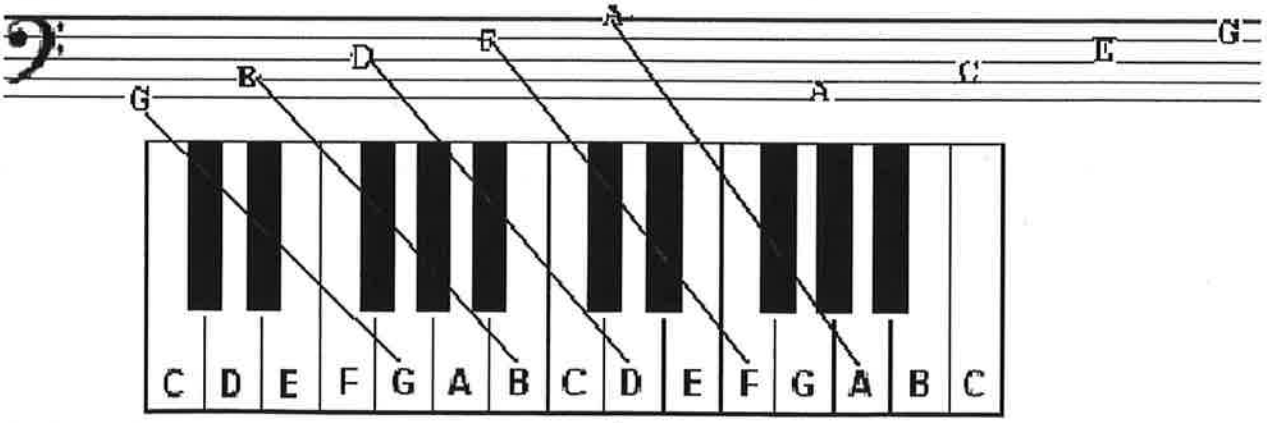


And now here's where the spaces are.



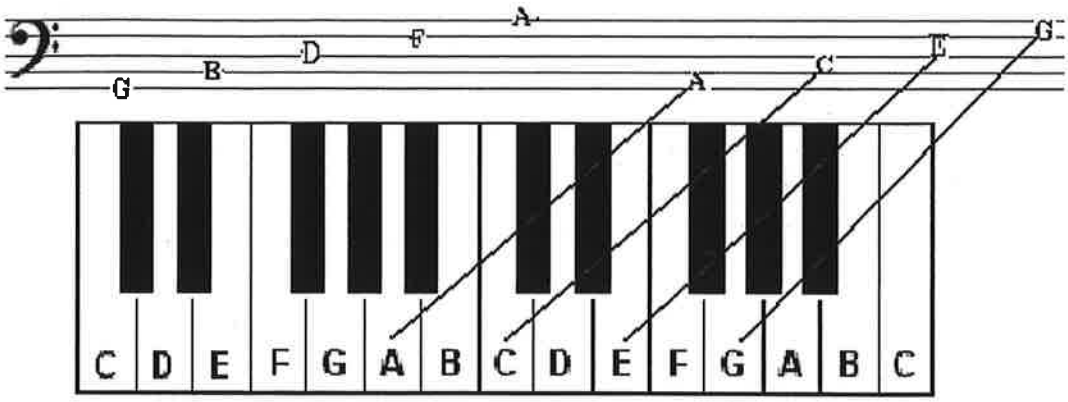
Notice as the notes on the staff move from the bottom to the top, the notes on the keyboard move from lower notes (on the left) to the higher notes on the right.

What about the bass clef lines and spaces? Here they are.



And now the spaces.

Note Names and the Music Staff



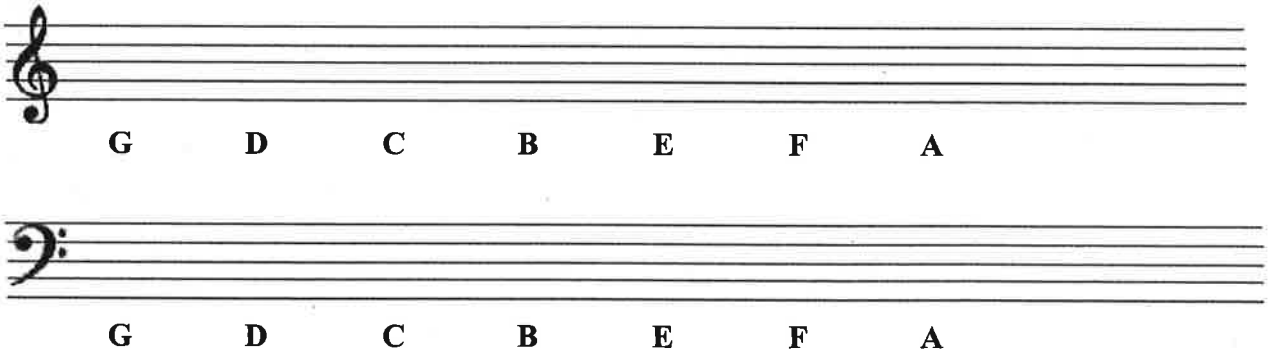
You may have the question **"But aren't those the same keys we just used for the treble clef?"**

You could not tell from this diagram, but we moved further down the keyboard to the left where the lower (bass) notes are. The position of the notes in relation to the black keys remains the same no matter where you are on the piano keyboard.

Think you have it? Now you try.

Activity

Now you draw the following whole notes on each music staff. Try to do it without looking back.



How did you do? With practice, you will get even better.

Note Values, Rests, and Time Signatures

Note values determine the amount of time that is assigned to a musical note. One beat of time is the time it takes your foot to tap down to the floor and come back up. 

In the time signatures we will learn here, a quarter note  is equal to one beat. When we do not play or sing we call it **resting**. A quarter rest  equals one beat of silence.

Examples of time signatures are $\frac{4}{4}$, $\frac{2}{4}$, and $\frac{6}{8}$. The time signature is found <u>after the clef sign</u> and after the key signature, but <u>before the beginning of the music</u>.

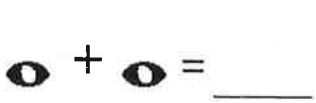
The most common time signature is $\frac{4}{4}$. This is why it is also called common time or simply written as **C**. This is by far the most used time signature in modern music.

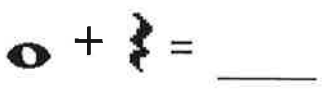
In common time, a quarter note  and a quarter rest  we learned get one beat.

Also in **C** time, A half note  and a half rest  will equal two beats and a whole note  and whole rest  will equal 4 beats.

Activity

Let's do some musical math. Substitute number values for the music symbols and solve the equations.

Dynamics and Symbols

Dynamics. A big word that means how loudly you play or sing the music. Sometimes we use symbols instead of words. The letter ***f*** written underneath a section of music means to play that section "forte" which means loudly. If we put an m in front of the ***f*** we have ***mf*** which stands for "mezzo forte" which means medium loud. The letter ***p*** is used and stands for "piano" which means to play softly. Using what we just learned about mezzo forte, what do you think ***mp*** would stand for? _____

Did you say medium soft? Very good!

What about when we hear a song start softly and gradually get louder? This is called a **crescendo** and is indicated by this symbol. Similarly, when a song is already loud and gets softer, it is called a **decrescendo** and is written the opposite of a **crescendo** like this. One way to remember which is which is to look at them from left to right like you were reading. Where the lines are the furthest apart, the sound is the loudest. Where they are close together, the sound is the softest! You could also use greater than/less than from your math class. Whichever way works for you.

What about when the music slows down? One reason is called a **ritardando** and it is abbreviated **rit**. Sometimes a song will slow down and come to a stop with the music holding out a note or chord. This is called a fermata. The symbol for fermata is  . It is nicknamed a "bird's eye." Do you think it looks like a bird's eye? _____.

Activity

Draw the symbol that means the music is loud and gradually gets softer _____.

Draw the symbol that means a note is held out for a longer time. _____.

Draw the symbol that means to play or sing the music loudly _____.

Dynamics and Symbols

Draw the symbol which means to slow the music down _____.

Draw the symbol which means to gradually get louder _____.

Draw the symbol which means to play or sing softly _____.

Draw the symbol which means to play or sing medium soft _____.

Double Bars, Dots and Articulations

A repeat sign  is different from a double bar or end bar  . Although they look very similar, they indicate very different things. The end bar  literally means the end of the music. The repeat sign  means a section or line will be played again. When you see the repeat sign, you either go back to the beginning of the section, or back to the repeat sign facing the other way  (internal repeat) and play or sing that part again. Look for the **two dots** to tell them apart.

Articulations and Dots

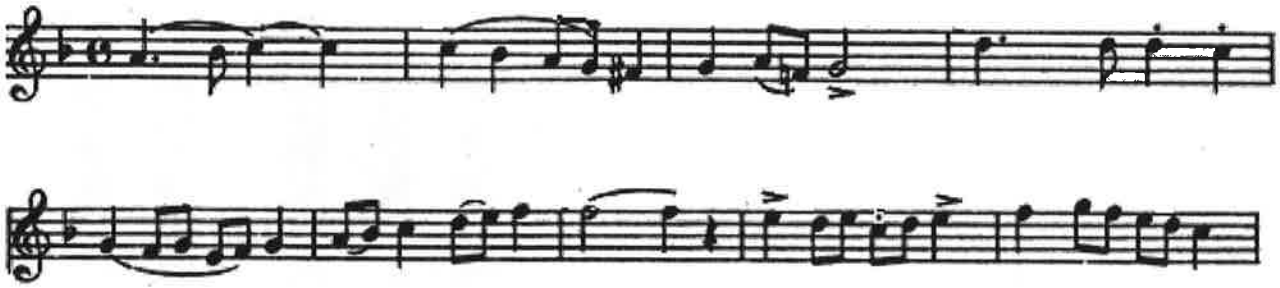
The way you begin and end a note is called articulation. When a note has a dot under or over it, the note is played with a short sound called staccato.  Do not get the dot underneath or over the top confused with a dot beside a note like this one  because this dot makes the note longer. In  time, a dotted quarter note would be played or sung one and one-half beats, not one beat like a regular quarter note. A dotted half note  would get three beats not two. When a note is connected with a curved line to the note in front of it  we call it a **slur**. To play or sing a **slur**, maintain the sound and move up or down to the next note. This creates a very smooth sound. There can be several notes slurred in music. What you need to remember is that the note changes to another line or space, it does not stay on the same line or space. If it did it would be a **tied** note like this.  Tied notes keep the same sound going, they just make it longer. **Remember**: <u>slurs change to different notes and ties stay on the same note</u>.

The third type of articulation we will learn about here is called an **accent**. An **accent** places

Double Bars, Dots and Articulations

more emphasis or stress on a given note so that note will stand out from the other notes. We indicate an **accent** by an > mark. This is easy to remember this because it looks like a sideways capital letter A without the middle bar. A for **accent**! Here's one in a section of music.

Activity
Under the following lines of music, write an S under notes you slur, an A for notes you accent, ST for staccato notes and T for tied notes. There are fourteen in all.

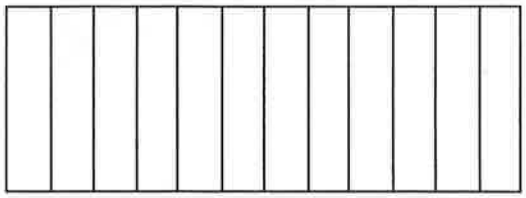


Did you find all fourteen? Have your teacher check your work.

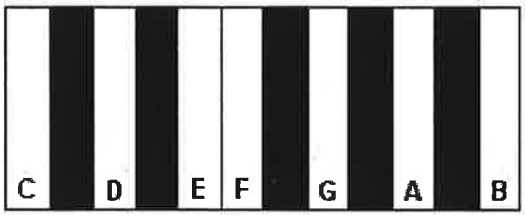
Understanding the Chromatic Scale

The way names of notes came about had a lot to do with the development of keyboard instruments.

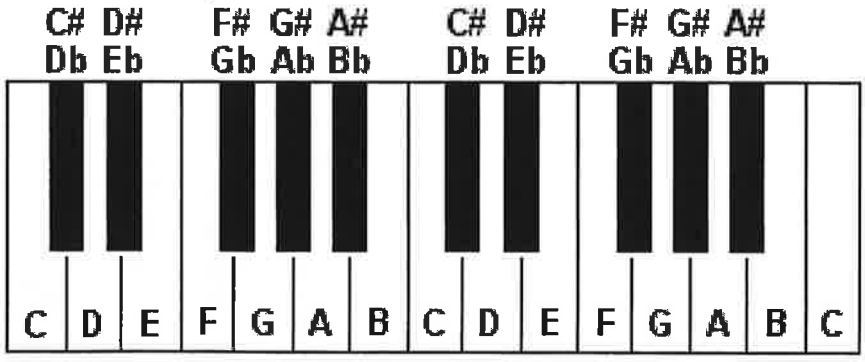
Imagine a keyboard with nothing but white keys:



The keyboard player would have difficulty keeping track of which note was which. The first keyboards were like this until someone had the idea of painting some of the keys black.



Then came an even better idea - the black keys were narrowed and raised in height so that the player could find individual keys by touch alone.



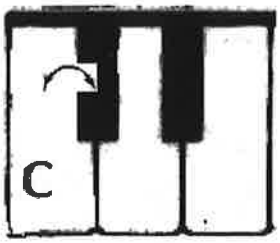
In Review:

The most helpful part of this is the pattern of black notes. They are grouped in twos and threes.

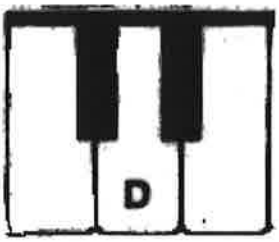
Understanding the Chromatic Scale

This enables the player uniquely to identify each note on the keyboard. The white (natural) notes are found like this:

C is to the left of each pattern of 2 black keys.



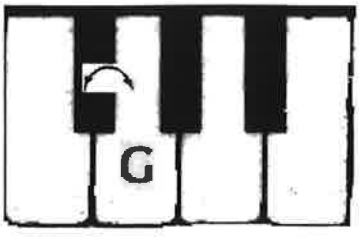
D is in the middle of each pattern of 2 black keys.



E is to the right of each pattern of 2 black keys.

F is to the left of each pattern of 3 black keys.

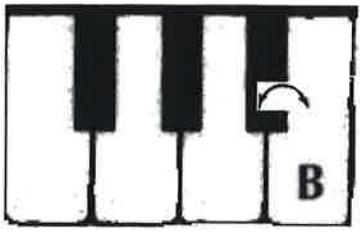
G is to the right of the lowest key in the pattern of 3 black keys.



Understanding the Chromatic Scale

A is to the left of the highest key in the pattern of 3 black keys.

B is to the right of the highest key in the pattern of 3 black keys.

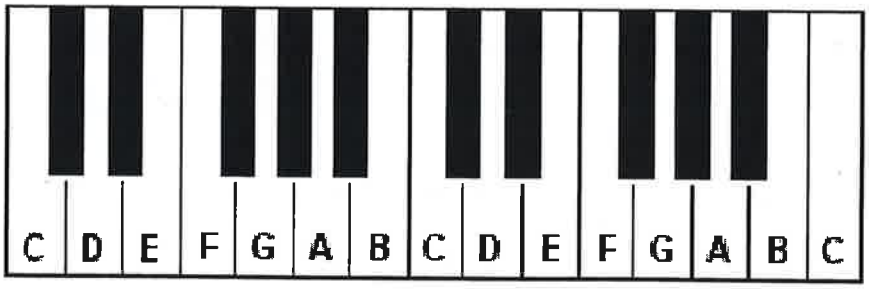


What are sharps, flats, and natural notes?

A sharp (#) raises the sound of a natural note by one half step.

A flat (b) lowers the sound of a natural note by one half step.

When we see these in the key signature (more on this later), this tells us all notes with the same letter name as those on that line or space are raised (#) or lowered (*b*). A natural sign (♮)**cancels a flat or sharp. Let's return to the keyboard and look at this.**



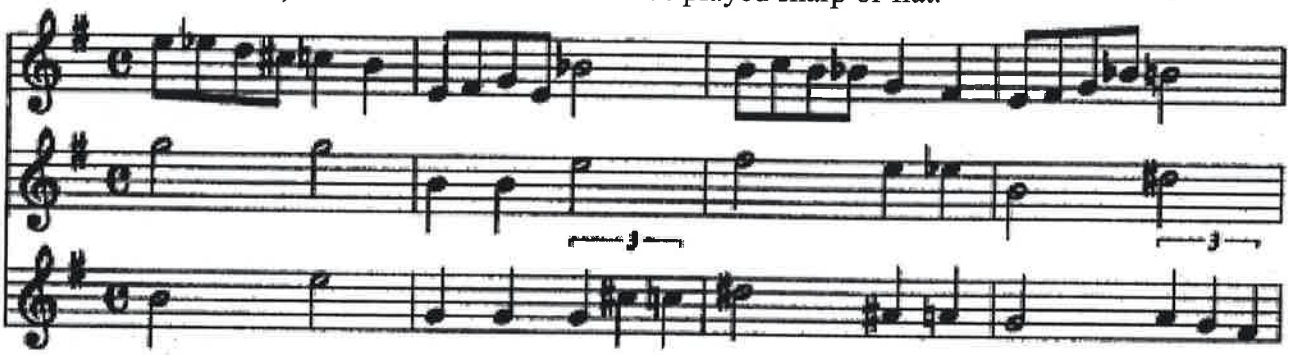
Notice that the letters on the white keys do not have the sharp symbol (#) or the flat symbol (*b*). This indicates that they are natural (♮) or regular. A sharp or flat would move normally from one of the keys shown above, to one of the black keys. How do you tell what note the sharp or flat is on?

Understanding the Chromatic Scale

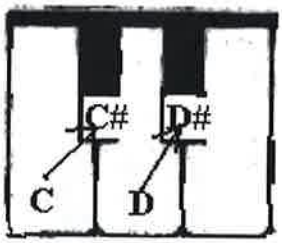
Look at the middle part of the sharp (looks like a square) as it sits on a music staff. The line or space that part of the symbol is on tells you which note is sharp. And if you look for the round part of a flat as it sits on a music staff, you can tell which from what line or space that part is on which note is flat.

Activity

In the exercise below, circle all notes that should be played sharp or flat.



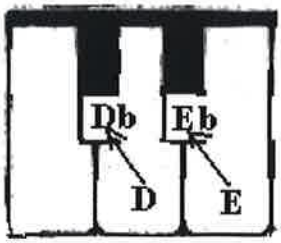
Let's go to the piano keyboard and look at this a little more.



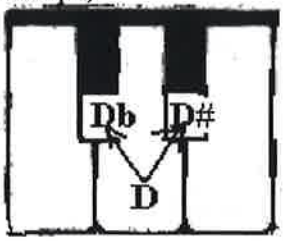
If we were to make the note C change to C #, we would move up from the white key C to the black key that is C#. If we were to make the note D change to D# we would move from the white key D to the black key D#. This is how we would treat all other notes that we were making sharp, not just C and D. What about the flats?

Let's examine this a little further.

Understanding the Chromatic Scale

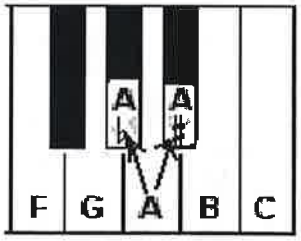


If we took the white keynotes D and E and went down (to the left) to the next key we came to we would be making them flat. D would change to Db and E would change to Eb. And like the sharps, this movement is how we would make all natural notes flat.



Still confused? Here's an example.

In the picture above, the regular D (in the middle) would be called D natural. Usually when we see natural notes, no sign is indicated after the letter designation . To make it sharp (raise the sound ½ step), we would move to the black key on the right (raise). To make the natural note Db, we would lower the note (left) from the white D key to the black Db one. Think you have it? Let's do one more just in case.



In this picture we see A natural (regular) in the middle. Moving up a key to the right we raise the note ½ step and it becomes A sharp (A#). Moving to the left we lower A natural ½ step and it becomes A flat (Ab). This will work with any musical note of designated pitch.

How can you remember this? Think: **left-lower**=flat**, right-raise**=sharp**.**

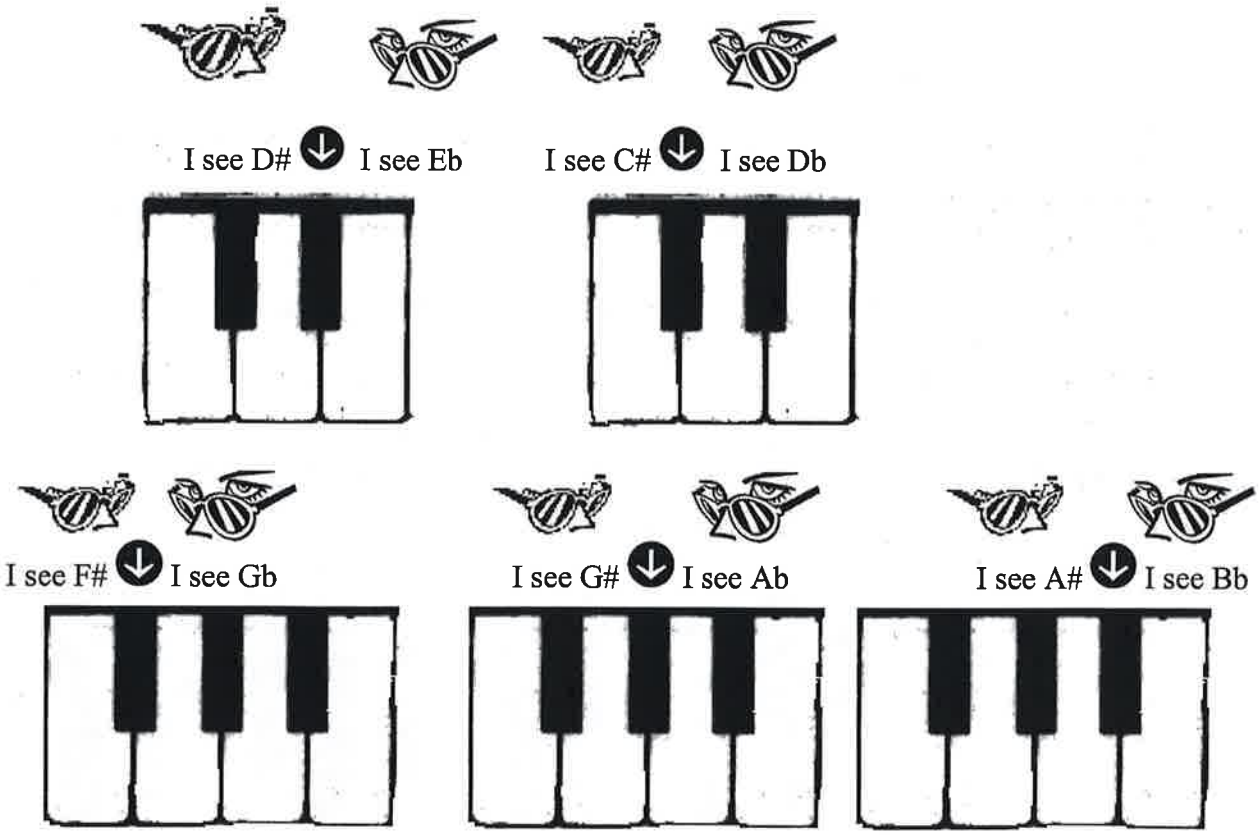
Understanding the Chromatic Scale

Can some notes be both sharp and flat? Yes! The black keys can have two names. Check it out.

Enharmonic Tones

The black notes each have two possible names depending on whether you are looking up at them from the note below or down at them from the note above.

On the keyboard on page 1, notice the black keys have two names above each one. Each two names share the same note and key on the keyboard.. Which name you call the note would depend on whether you were looking up at it from below or down on it from above. Check out these examples. The arrow shows the key on the keyboard we are talking about.

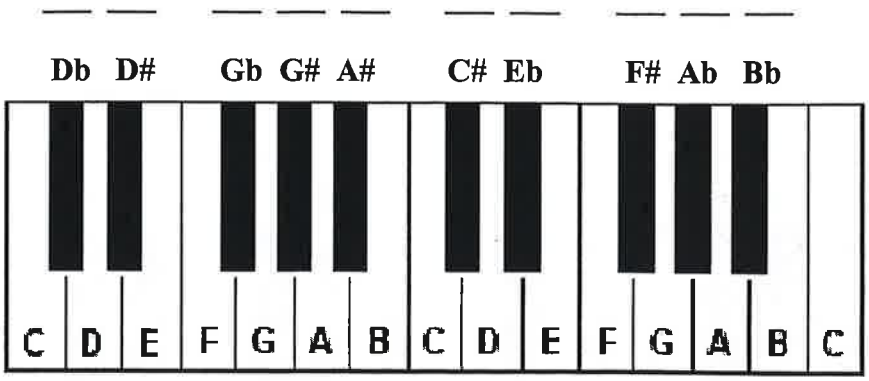


Enharmonic notes are the same note (key on keyboard) and can be written two different ways. Now, turn the page and try some yourself. Good luck!

Understanding the Chromatic Scale

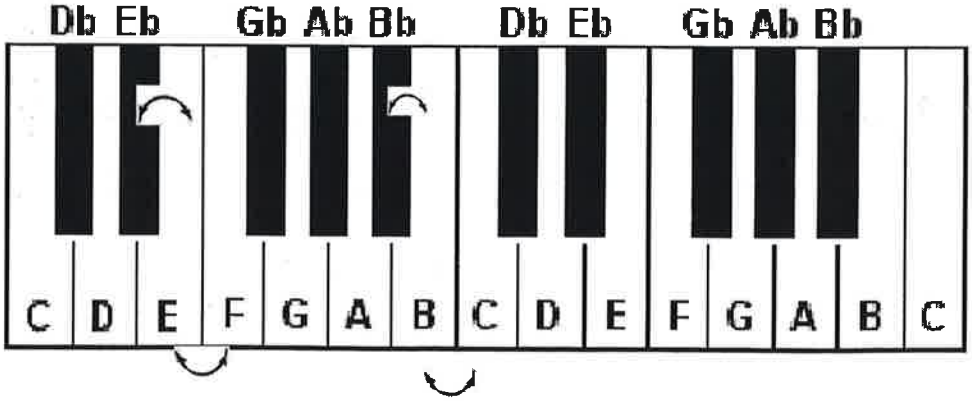
Activity

Below, write the matching other name that goes with each given note. Use the keyboard from page one if you need help.



Moving from a white key to a black key is a half step. In most cases, moving from a white key to another white key is a whole step. What are we talking about?

Whole steps and half steps. What are they? Let's go back to the piano keyboard. A half step is the distance when you move from one key on the piano to the closest key with no keys left in between. The arrows show several examples: B to C, E to F, Eb too E, and Ab to A. Notice there are no black keys in between B to C and E to F. This means they are already half steps between those keys and they do not need a black key in between.



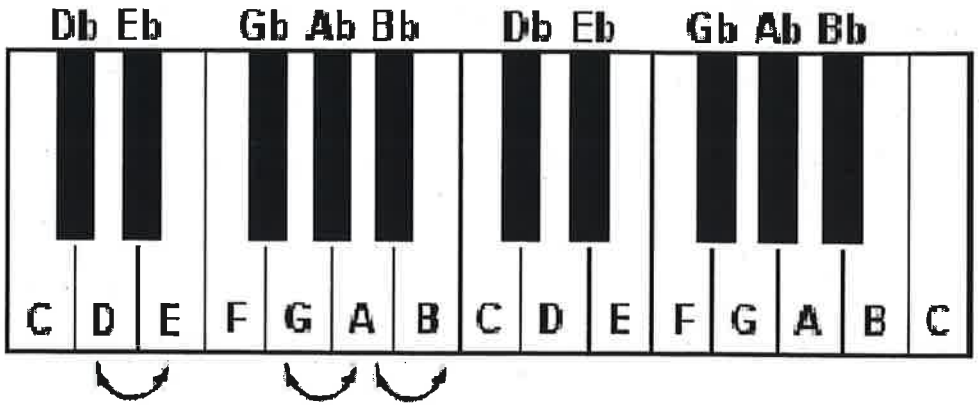
Understanding the Chromatic Scale

Activity

Write some other examples of half steps below besides the ones we have already done.

From _____ to _____ From _____ to _____ From _____ to _____

A whole step is the distance when you move from one key to another key and allow for one key to be in between the two keys. The arrows show several examples of whole steps: D to E, G to A, and A to B.



Activity

Name some other examples of whole steps besides the ones we have already done.

From _____ to _____ From _____ to _____ From _____ to _____

Let's get back to the chromatic scale on the keyboard for a minute.

Going Up and Down the Chromatic Scale

The chromatic scale occurs when a player plays every note and doesn't skip any notes.

A chromatic scale could start on any note you wanted. We will start on the note C.

When we play or sing going up the scale (to the right) we would usually write using sharps (#).

Like this: **C C# D E F F# G G# A A# B C C# D D# E F F# G G# A A# B C etc.**

If we were playing or singing going down (to the left), we would usually write using flats (b).

Like this: **C B Bb A Ab G Gb F E Eb D Db C B Bb A Ab G Gb F E Eb D Db etc.**

Understanding the Chromatic Scale

Activity
Below, show which intervals have the distance of a half step by writing ½ in the blank, and which have a whole step by writing 1 in the blank. Use the keyboard above for help.

Example:

Activity
Write out the letter names for an ascending chromatic scale. Try to do it without looking back. Some of the letter/note names are done for you.

C ____ ____ D# ____ ____ F# ____ ____ A ____ ____ C

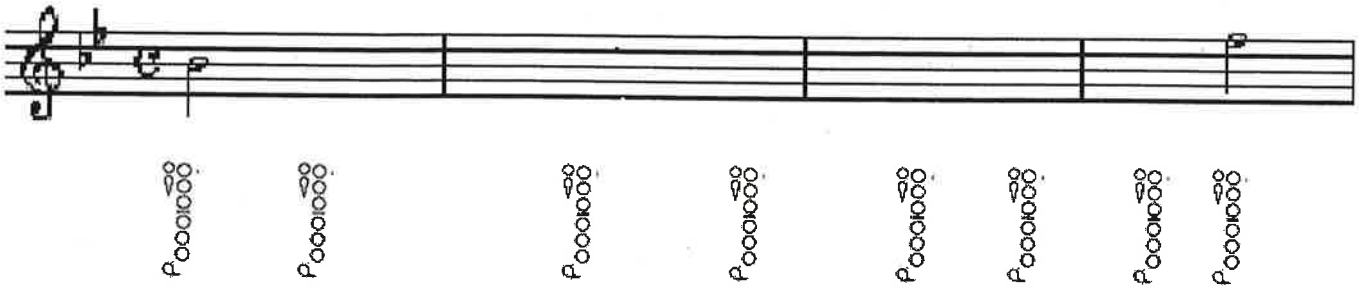
Now try a descending one.

C ____ ____ A ____ ____ Gb ____ ____ Eb____ ___ C

Activity for Instrumentalists

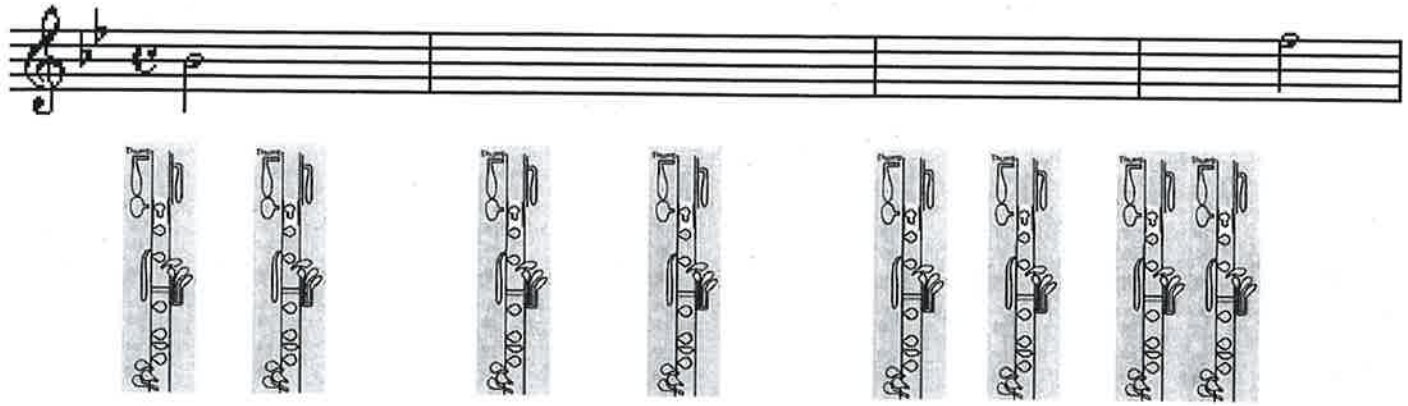
On the staff below, write part of the chromatic scale for the instrument you play in half notes, then fill in the keys to indicate the correct fingerings for each note.

A. Flute

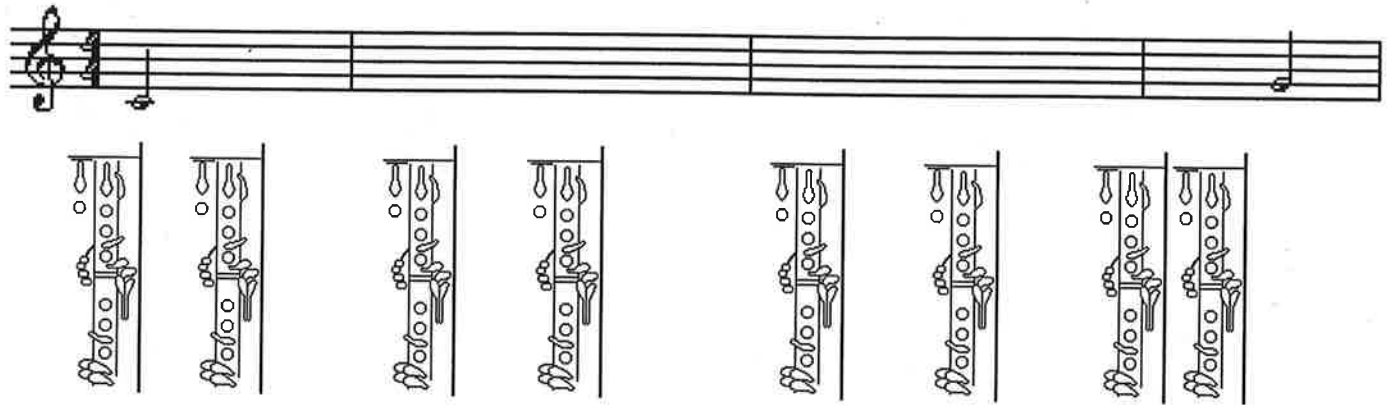


Understanding the Chromatic Scale

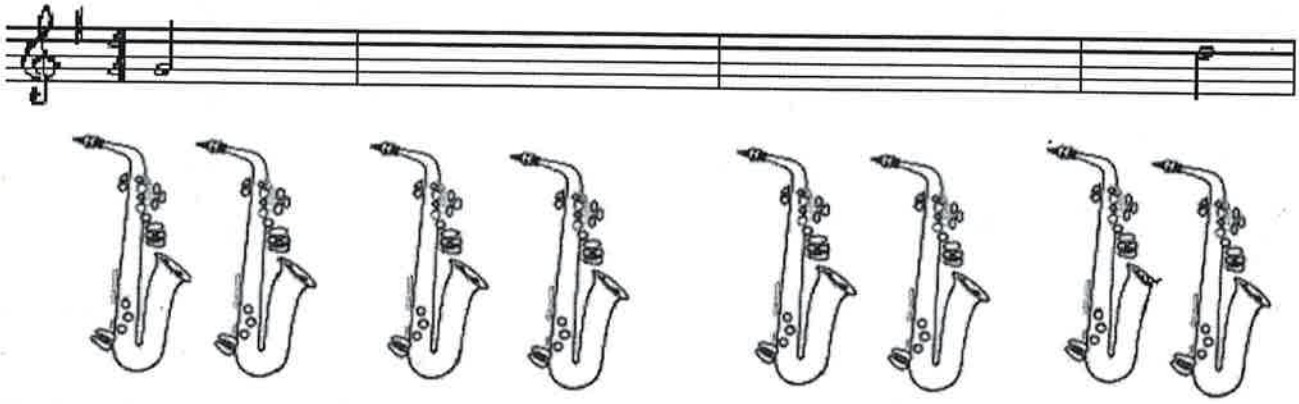
B. Oboe



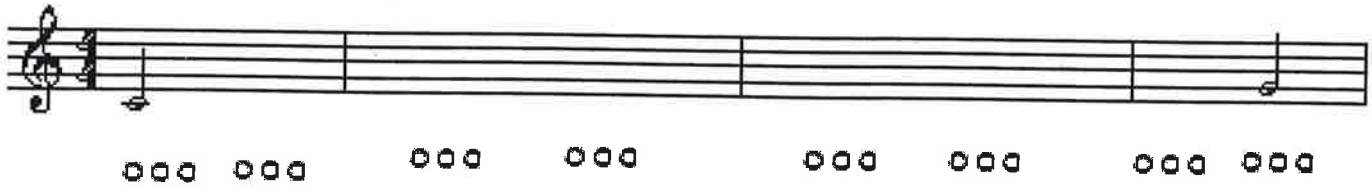
C. Clarinet



D. Alto and baritone saxophone

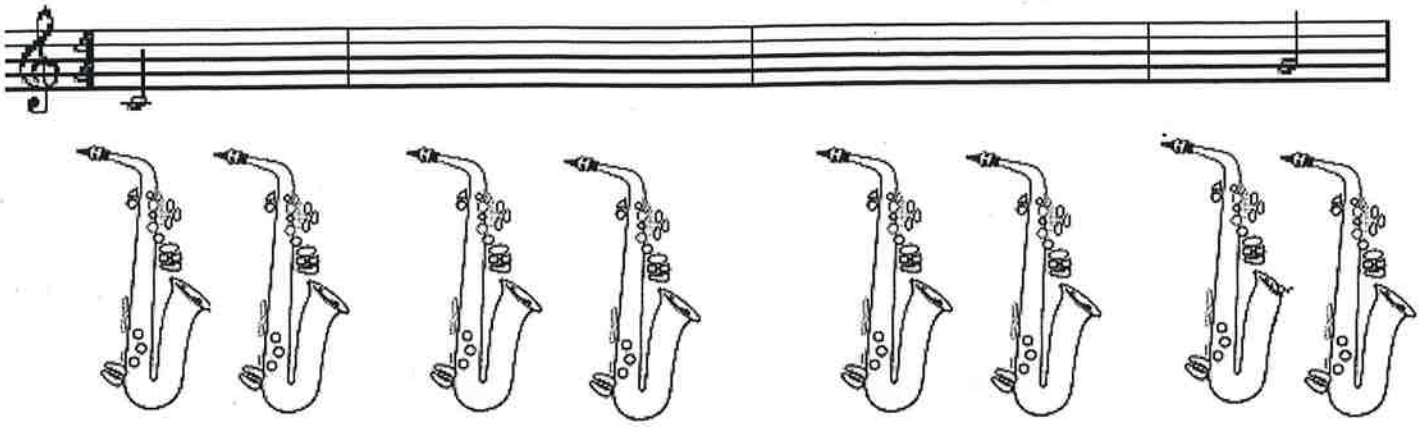


E. Trumpet and Baritone horn TC

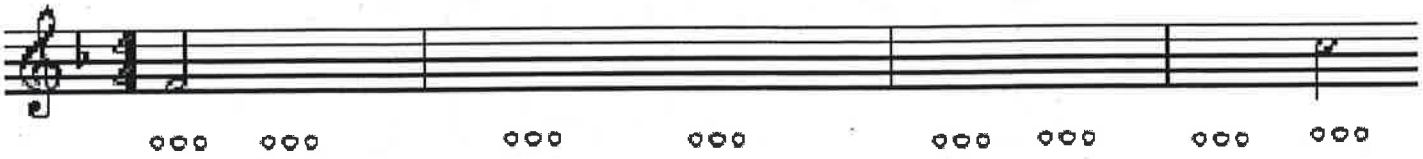


Understanding the Chromatic Scale

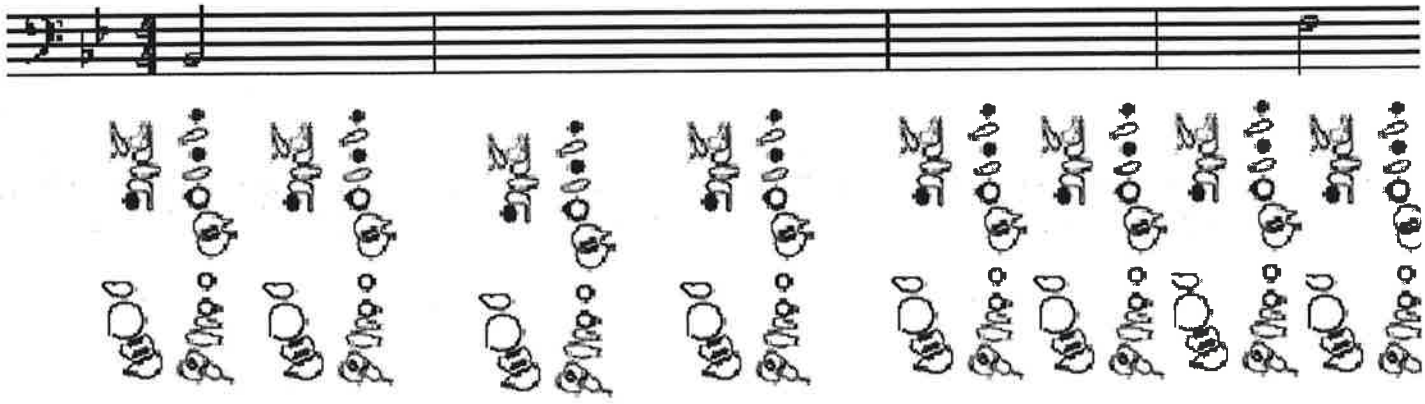
E. Tenor Saxophone



F. French horn



G. Bassoon

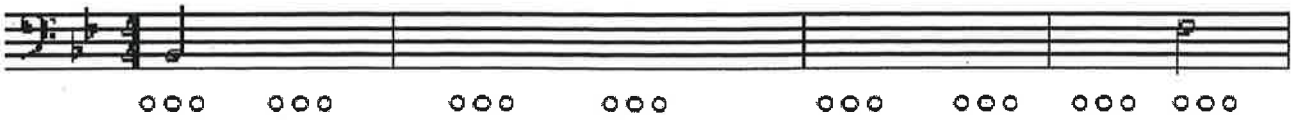


H. Trombone

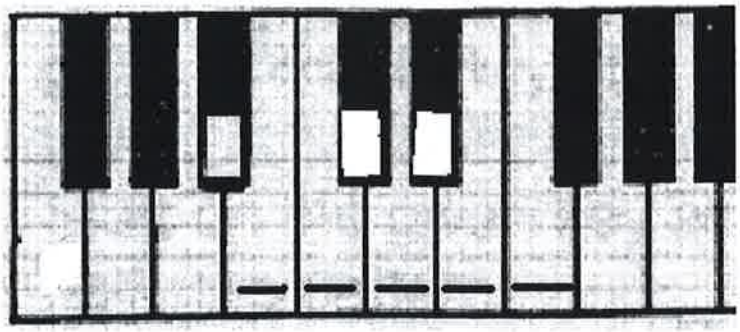
position ___ ___ ___ ___ ___ ___ ___ ___

Understanding the Chromatic Scale

I. Baritone BC and Tuba

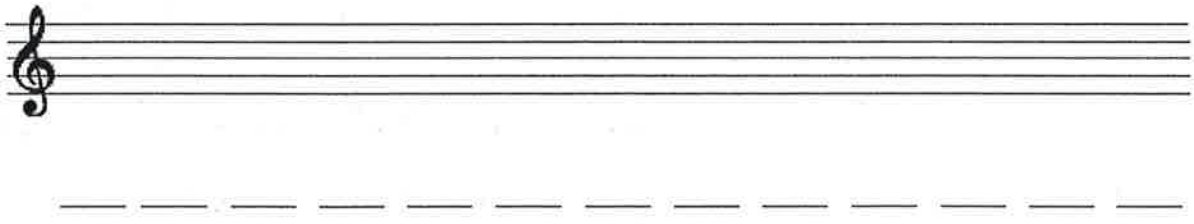


J. Percussions



Activity for Vocalists

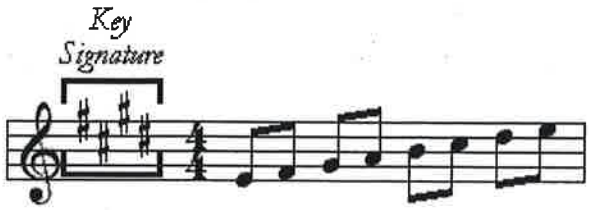
Starting on C, write a chromatic scale in half notes. Write the vocal solfege syllable under each note.



Larger views available at:
http://www.music.vt.edu/musicdictionary/appendix/scales/solmization/syllables.html

Key Signatures and Major Scales

Sharps (#) and flats (b) written at the beginning of a piece of music make up what is known as the key signature. They are written immediately after the clef signs. Here is an example of a music staff with a treble clef sign, key signature, time signature, and the accompanying scale that goes with the key signature:

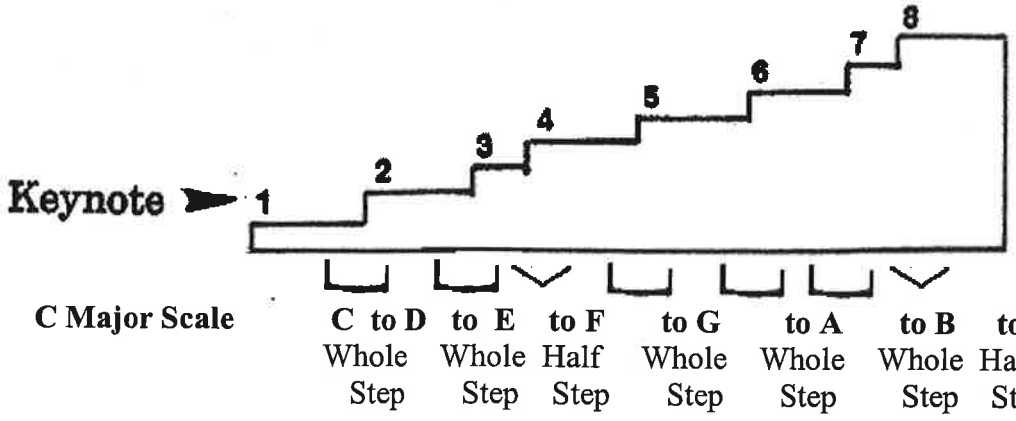


Here is an example of a music staff with a bass clef sign and key signature.

There are keys on a keyboard and there are keys that open doors. A specific key would open a particular door. The same idea applies to a musical key.

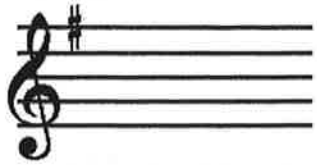
A specific musical key indicates a particular scale or a particular system of notes. The musical key gets its name from the keynote or first note of a scale.

A scale is a series of notes that move up or down like steps. Like this:

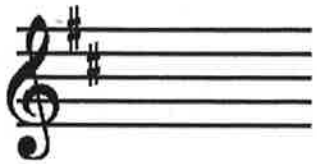


Key Signatures and Major Scales

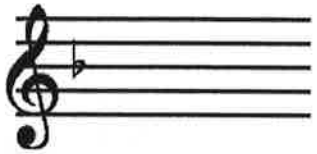
Key Signatures



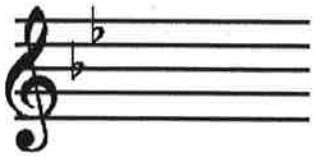
The sharp sign (#) on the top line shows that every F should be played or sung as F#. Even if it occurred on the bottom space. To tell what key this shows, go to the last sharp on the right, and then find what note name is immediately above it. Since the sharp is on the F line, the note above F would be G. This key signature is in the key of G. Let's try a couple more.



The last sharp on the right is the note C. What comes next in the alphabet? Did you say D? Correct! Let's try some flat keys.



To identify the flat key signatures, go to the last flat on the right and count down **four** lines and spaces including the one we started on. The flat is on the line B. Let's count down 4, B-A-G-F. So the key with only one flat is.....F! Let's try one more.



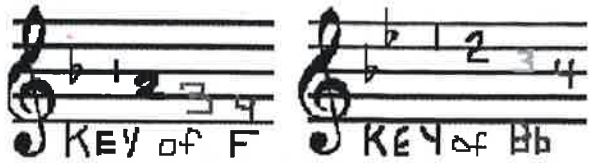
Go to the last flat on the right. What space is it on? E? Correct! Let's count down, E-D-C-B. So the key with two flats is .....Bb! Get it? What about when we see no sharps or flats? You just have to memorize this one. It is the key of **C**.

Humor: Did you hear about the man who polished his piano's natural keys? He wanted to be able to play from C to shining C!

Key Signatures and Major Scales

It will help you to know that the order of the sharps and flats on the staff always follows the same order. If you have one flat in the key signature, it will always be Bb. Two flats will always be Bb and Eb.You can remember the first four flats by the word BEAD. One flat is B, the second is E, the third is A and the fourth is D. Remember to go to the last flat on the right side and count down four including the line or space the last flat is on to find the key signature. For the rest of the flats, use a math phrase: **G**reatest **C**ommon **F**actor.

The flats in order: Bb, Eb, Ab, Db, Gb, Cb, Fb.



The clue to remember the order the sharps follow use this acronym:

Fast **C**ars **G**o **D**angerously **A**round **E**very **B**end-remember take the first letter of each word.

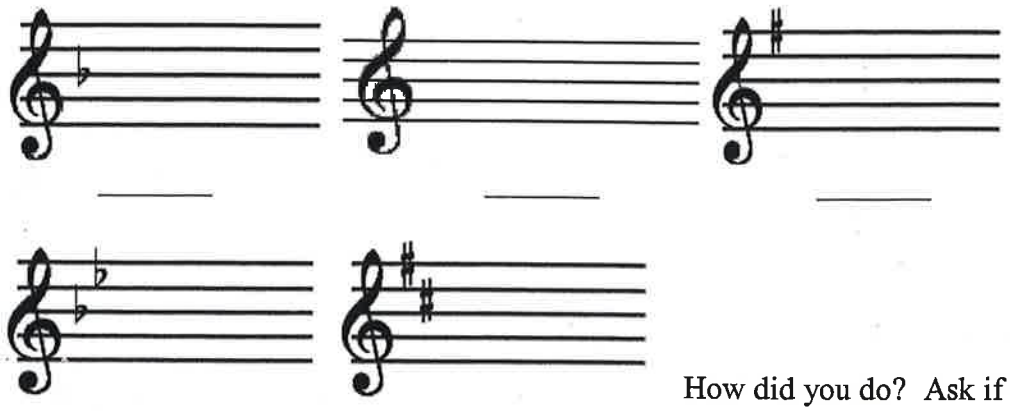
1 sharp will always be F 2 sharps will be F and C 3 sharps will be F, C, and G. And so on.

Check out the first 4 sharps. F, C, G, and D. If you had 3 more sharps, what would they be? Read from left to right. Use the clue above if you need help. ____, ____, ____.

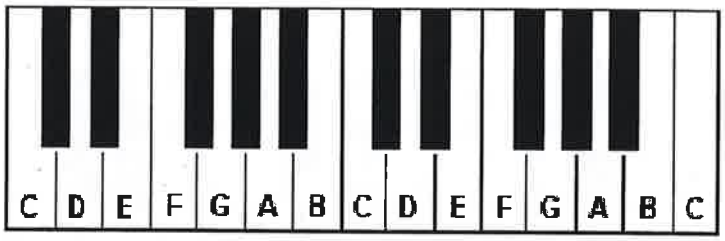
Key Signatures and Major Scales

Activity

Identify the following key signatures by writing the letter name in the blank.



How did you do? Ask if you need help.



Now let's go back and look at the major scale. The pattern for a major scale was whole, whole, half, whole, whole, whole, half. When you move from one note to the next it is called a step. Whole steps leave a note in between. Notice between B & C and E & F there are no black keys? This means they are already half steps.

How can you remember the formula for major scales? Here are 3 ways. There may be more.

1. **W W H W W W H**
   (2 W's) H (3 W's) H

2. **(W W H) W (W W H)**
   pattern whole in the middle pattern

3. We Walked Home When We Walked Home
   W W H W W W H

What is another way to remember? Write it down. _____

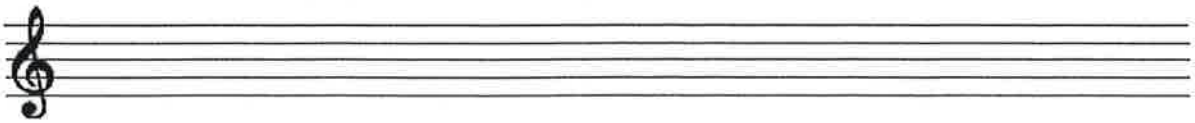
Key Signatures and Major Scales

Activity

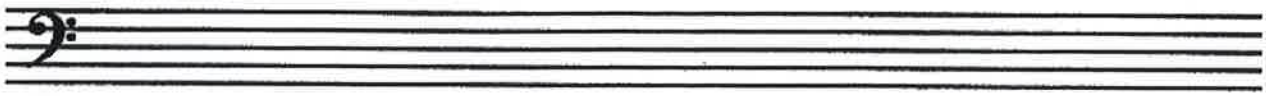
Start on C and see if you can name the missing notes in a C major scale.

C ___ ___ ___ G ___ ___ C

Treble clef musicians, try to write a C major scale on the staff below in whole notes.



Bass clef musicians, try to write a C major scale on the staff below in whole notes.



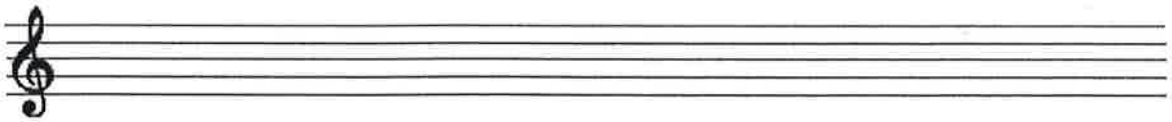
Activity

Write the letter names of the F major scale on the keys above.

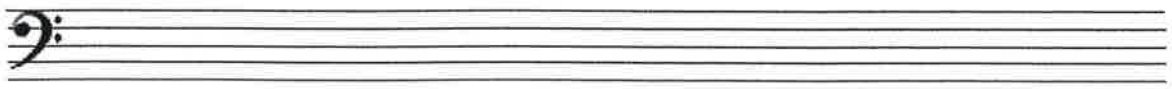
What letters did you write? F ___ ___ ___ ___ ___ ___ ___

Have your teacher check your work.

Now write the notes of the F major scale on the music staff in whole notes. Don't forget to write in the key signature.

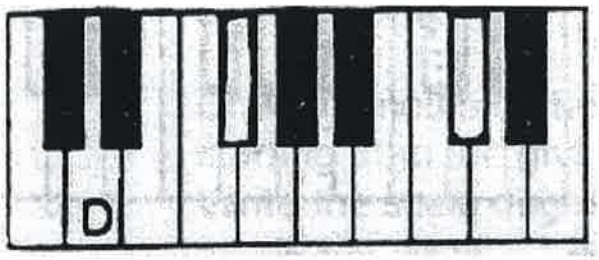


Bass clef musicians use this clef.



Ask your teacher to check your work. How did you do?

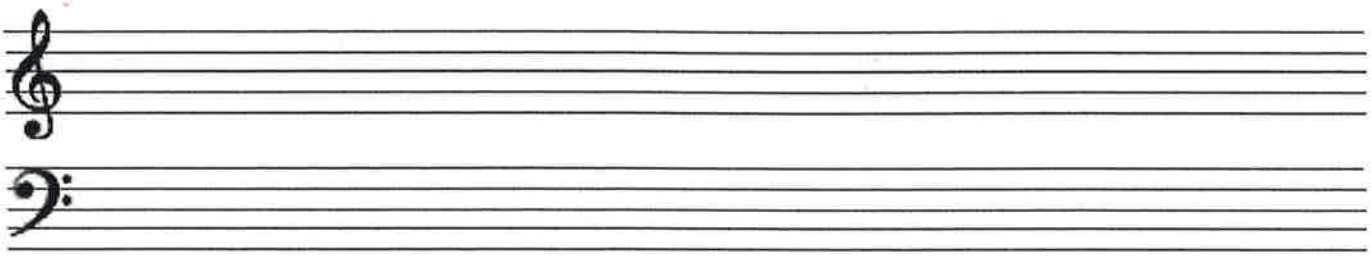
Key Signatures and Major Scales



Try one more. The D major scale. Write the letter names of the scale on the keys.

What did you write? D ___ ___ ___ ___ ___ ___ ___ How did you do?

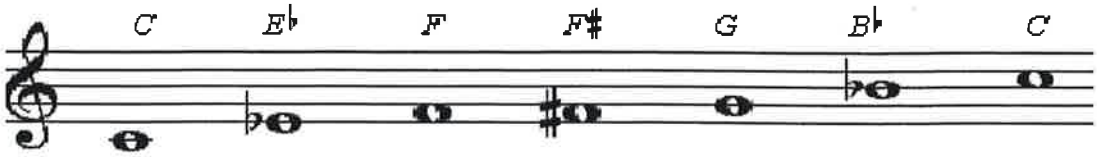
Select a staff and write the D major scale. Don't forget to write in the key signature.



Do you understand major scales and key signatures now? Ask for help if you still have questions.

The Blues Scale

Today it's time to get blue. Not the color, the music. Blues music has a rich history of certain sounds and tones. These sounds are made by using selected notes from the chromatic scale and leaving others out. Check this out this demonstration by your teacher.



Root **Flat 3rd** **4th** **Sharp 4th (or flat 5th)** **5th** **Flat 7th** **Octave**

We give numbers to the notes of the scale. The first note or root note of a scale we give the number "1," the second note "2," and so on.

Here are the "numbers" and notes for the regular C major scale.

C D E F G A B C
1 2 3 4 5 6 7 8 (octave)

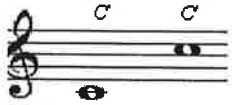
Now the C blues scale.

C Eb F F# G Bb C
1 b3 4 #4 5 b7 8 What do you see is different between the two?_____

_____

What do you see that stays the same? _____

Notice how the first and last notes have the same letter name? This amount of movement is called an octave. You can remember this by thinking about an octopus. How many arms does an octopus have? 8!



Root **Octave**

When we jump from a note to another that has the exact same letter name, we make an octave skip.

The Blues Scale (cont.)

Steps in making a blues scale.

1. The first note in each scale is the root. Write the root note first.
2. Skip the second note in the scale
3. Go to the third note, write it and make then make it flat.
4. Write the fourth note just as it is.
5. Write another fourth note, but make this one sharp.
6. Write the fifth note just as it is.
7. Write the 7^{th} note and make it flat.
8. Keep the octave just as it is.

Let's work through another scale. Let's use the D scale.

First let's write out the numbers to the scale and which note they go with.

D	**E**	**F#**	**G**	**A**	**B**	**C#**	**D**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**

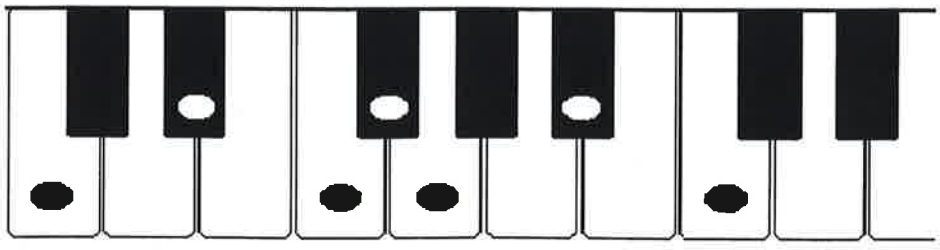
Now, you try to write out the notes to the D blues scale.

D	___	___	___	___	___	**D**
1	**b3**	**4**	**#4**	**5**	**b7**	**8**

Activity I
Write the formula to make a blues scale. Look back if you need to.

Root, flat _____, _____, sharp _____, fifth, flat _____, and the octave.

Activity II
Now write the letter names of the C blues scale on the keyboard below.



The notes with the black and white dots are the keys you will need.

The Blues Scale (cont.)

Activity III

Write out the blues scale for the following scales.

F G A Bb C D E F
1 2 3 4 5 6 7 8

F ___ ___ B ___ ___ F
1 b3 4 5 b7 8

G A B C D E F# G
1 2 3 4 5 6 7 8

G ___ C ___ ___ F ___
1 b3 #4 5 8

A B C# D E F# G# A
1 2 3 4 5 6 7 8

A C ___ ___ ___ ___ A
1 b3 4 #4 5 b7 8

Bb C D Eb F G A Bb
1 2 3 4 5 6 7 8

___ Db ___ E ___ ___ Bb
1 b3 4 #4 5 b7 8

Now try to play or sing the blues scales. Put on your shades first!

Extension of Activity: Play around with it. Add someone playing the bass and piano.

Very Cool! Peace out Musicians!

Appendix G

Post Project Evaluation Form

Post Project Evaluation Form

Project Title: Designing and Implementing a Program to Enhance Music Theory Achievement through Integrated Learning Exercises

Project Director: D. Barkley

Participating Director: _____

Participating School(s): _____

Please rate the following by circling the number/answer of your choice.

1. Overall rating of project 4=superior 3=excellent 2=good 1=not effective

2. The overall effectiveness of the activities
   4=superior 3=excellent 2=good 1=not effective

3. The sequence of the activities 4=superior 3=excellent 2=good 1=not effective

4. How would you rate the instructions for the teacher?
   4=superior-I understood the directions and goals for each day.
   3=excellent-I understood most of the directions and goals for each day.
   2=good-The directions/goals for each day were ok, but some were not clear.
   1=not clear/did not understand-I had numerous questions with how the activities were to be implemented.

5. How would you rate the student *STT* manual in overall presentation?
   4=superior-The presentation was superior and provided many useful activities.
   3=excellent-The presentation was excellent, with some useful activities.
   2=good-The presentation was good, but had sections that were unclear.
   1=not effective-The presentation format did not meet the needs of my students.

6. Would you be willing to participate in a follow up program to the *STT*?
   yes no

7. Do you plan to use the STT program again in a different year? yes no

8. What changes would you suggest to improve the program? _____
   _____
   _____

9. What did you like about the program? _____
   _____
   _____